BASIC PSYCHOLOGY

HOW WE BEHAVE AND WHY

BY

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PREFACE

THIS little book on psychology is called "basic" not because it is an armchair manual of the "Psychology Made Easy" type written in Basic English, but because it embodies a treatment which deals with fundamental propositions and requires no previous knowledge on the part of the reader. It is offered to serious students who do not expect to learn anything worth while without making a certain mental effort, and who may wish to follow up what they find here by attempting the questions at the end of each chapter, and by further reading on the lines suggested. It seeks to provide a conspectus of the field of psychology without entering into detail, so that the reader can see what psychology is about and judge for himself whether he wishes to continue the study. It is hoped that it may prove useful in study groups, whether in H.M. Forces or elsewhere, and, although educational applications are not specifically made, to students in training for teaching and other forms of social work.

Every branch of thought has its appropriate language, and, while technical terms have here been avoided as far as possible, no attempt has been made to exclude them altogether. Those used are explained in their first context, and a glossary is added at the end for the convenience of the reader.

I gratefully acknowledge my thanks to my sister, Miss H. S. Ross, M.A., my nephew, Mr Hamish R. Gray, LL.B., and my friends Dr J. N. Langdon and Flight Lieutenant T. B. Shepherd, R.A.F., for their critical reading of my manuscript and their many valuable suggestions. But the responsibility for all defects is entirely my own.

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Chapter I

BEHAVIOUR, LIFE, AND MIND

What is Psychology?

Psychology is the study of behaviour and its motives.[1] In its scope all behaviour is included, whether that of individual adults, adolescents, infants, insane persons, animals, or groups of people. Each of these kinds of behaviour is the subject-matter of a special branch of psychological study. In this small volume we shall restrict our field to the behaviour of ordinary men and women, making only occasional references to other modes of behaviour for the purpose of illustration and comparison. For our object is to understand our own behaviour and that of our fellow-men: any light we can gain on the nature of behaviour and its motives will help us not only to control and direct ourselves but also to guide and influence others.

We have defined psychology as a study rather than a science, for much of our knowledge is not yet of an exact character. The word 'science' implies a degree of exactness that can be expressed in terms of number and mathematical formulæ; and while there are certain branches of psychology which are reaching numerical exactitude, there are others which by their very nature are probably incapable of it. In one respect, however, the study of psychology always ranges itself with science. It takes the positive attitude of science rather than the normative attitude of philosophical studies; that is to say, it studies behaviour as it is, not as it ought to be. Psychology does not concern itself with the evaluation of behaviour, and it is just as much interested in bad

[1] See glossary for the sense in which the word 'motive' is used in this book.

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behaviour as in good. Possibly psychologists are wrong in so limiting themselves; possibly their positive attitude results in their account of behaviour being fragmentary and incomplete. For we know 'in our bones' that one. form of human behaviour is better than another. With such a limitation psychology is unable to give any completely convincing account of what we call conscience, or our sense of right and wrong. We must bear this in mind when in these pages we stick to the customary positive standpoint in our account of behaviour.

Behaviour

Now, what do we mean by 'behaviour'? Let us try to understand its nature by contrasting a mode of action that is not behaviour with one that is. If a piece of soft iron is placed sufficiently near to a magnet it moves towards the magnet and clings to it. We shall not call that action 'behaviour.' If a dish of milk or some other attractive food is placed where a cat can see it or smell it, the cat moves towards the dish and deals with the food; and this we shall call 'behaviour.' Wherein lies the difference? The movement of the iron towards the magnet can be explained entirely in terms of physical laws, whereas the behaviour of the cat cannot be so explained. The cat's action is not entirely caused by outside circumstances; rather is it spontaneous, directed from within. It is action with an end in view—namely, the satisfaction of the cat's hunger, or at least the pleasure of eating. ·Further, the cat need not necessarily move towards the milk: it might prefer to remain sleeping by the fire. But the iron has no choice in the matter: it cannot vary its responses to a situation as the cat can. It has no purpose of its own, while the cat's action is definitely purposive, having an end in view.` The keynote of behaviour is purpose. Behaviour,

as we shall use the term in these pages, is action that seems
to have some foresight of its effects, of events that have not
yet happened but to whose happening the behaviour
itself contributes.   Outside circumstances do not *cause*
behaviour, in the usual scientific sense of the term;
rather is behaviour the response of a person to the
circumstances in which he finds himself.

Is Our Assumption Valid ?

The thoughtful reader is no doubt asking by what right
we make the assumption that behaviour is not mechanical
action.   Such an assumption is not intended dogmatically;
and it must be freely admitted that no proof of it can be
forthcoming.   In fact, its validity has often been doubted.
The great philosopher Descartes, noting that both a bell
and a dog emit a sound when they are struck, saw no
reason for assuming that there is any difference in kind
between the two : any difference that exists is merely one in
degree of complexity of the mechanism involved.   In our
own day a school of psychologists called 'behaviourists'
take a similar line; they assume that behaviour can be
explained by the laws of physical science, and they push
such an explanation as far as it will go.   It would be
arrogant to assert too dogmatically that they are on a
wrong tack, yet it may be pointed out that we have just
as much right to our assumption as they have to theirs.
In any case, if there is really no difference in kind between
behaviour and mechanical action it is just as likely that
mechanical action may, in the last resort, prove to be of
the nature of behaviour as that behaviour may be merely
mechanical action.   Physical science these days has
strange things to say about single electrons having
something like free will.   We might, indeed, support our
assumption by certain lines of philosophical argument;

but its real justification lies in the certainty that by making it we shall, in the present state of our knowledge, get a much fuller, more satisfactory, and more convincing account of behaviour than we could if we did not make it. We accept it then, as a provisional theory or, to use the scientific term, an hypothesis.

Life

We may state our assumption in other terms by saying that behaviour is the activity of a living creature, while mechanical action is characteristic of dead matter. Here our assertion amounts to saying that the living is essentially different from the non-living. This is the main tenet of what is called the vitalist school of thought. There are various characteristics of living things which seem to lend support to such a view. (a) No one has yet succeeded in making a living cell out of dead matter. While physical and chemical laws certainly operate in our bodies, there is no guarantee that such laws, even if we had much fuller knowledge than at present, would prove adequate to explain the phenomenon we call life. (b) A living body is an organism; that is to say, it works as a whole. There is a unity in the diversity of its various parts, each of which acts as if it knew what all the others are doing; and the whole is more than the sum of the separate parts. (c) A living organism seems to have a certain amount of autonomy, or free will. That is not to say that it is free to defy the laws either of the physical world or of its own nature; but rather that, within the framework of such laws, it can vary its responses, much as the player of a game can choose how he will obey the rules which he is bound to keep. (d) A living organism grows by the assimilation of food, while machines have no such power. (e) There is no parallel in the realm of machinery to the

power of the living organism to reproduce itself. (f)A living organism, even if mutilated, can, to a greater or less extent, restore its stable bodily form. A striking example of this power is seen in the garden, where small cuttings of plants, if carefully tended, eventually become the whole plant. It is true that we human beings cannot regrow a lost limb as the lizard can its tail; but we show the same power of self-restoration in the healing of wounds and the growing again of our shorn hair. But damaged motor-cars do not repair themselves.

Taking all these facts into consideration, one feels justified in suggesting that the burden of proof rests not on the vitalists but on those who assert so confidently that a living being is nothing more than a complicated, cunningly devised machine. There is ample justification for the statement of an American writer, Patrick, who says: "Life is self-adjusting, self-maintaining, self-preserving, and self-perpetuating. There is nothing like this in the mechanical world. Machines do not adjust, maintain, or perpetuate themselves."

Mind

Again, we may state the distinction between behaviour and mechanical action, or between a living organism and a machine, by employing the notion of mind. It is the possession of at least a rudimentary mind that marks off the living being from the machine and makes its activity behaviour rather than mechanical action. What do we mean by 'mind'? We do not mean the brain and the nervous system, although these are certainly the bodily instruments of mind. Nor are we greatly helped by a definition of mind such as "an organized system of mental or purposive forces"; for the notions included in the terms 'mental,' 'purposive,' and 'force,' being themselves

mental in nature, are no clearer than the notion of mind. By 'mind' we mean that which lies behind behaviour, controlling or motivating it; and we have to infer its nature from our observations of behaviour in much the same way as a person with a mechanical bent can tell much about the internal structure of a machine merely by observing how it works. We need not worry unduly over our inability to define mind. It is an ultimate notion, and that is the reason why it cannot be defined in terms of anything else. We must accept it and try to build up our knowledge of it as we proceed.

The reader, of course, may say that this is very unsatisfactory and that he would at least wish to have as convincing evidence of the existence of mind as he has of the existence of matter; he is sure that matter exists because he has the evidence of his senses. But if, to take an example, he says that this book exists because he can see it and touch it, let him reflect for a moment and ask himself what it is of which he really has a right to be sure. He is entitled to be certain that he does *see* it and *touch* it, that he *believes* it exists; but beliefs and sensations of sight and touch are mental events, not material objects. So, strictly speaking, he is sure only of the reality of these mental events, not of the existence of the book itself. True, he assumes that there is a material object outside himself which occasions these mental events, but an assumption is not a proof. Conceivably he might be wrong. In what we call 'hallucination' we see things that are not there to be seen. From such considerations we should be convinced that we have even more direct evidence of the existence of mind than of the existence of matter.

Psychology used to be defined as the study of mind. Defining it as the study of behaviour provides no way of escape from the difficult notion of mind unless the barren

way of the behaviourists is followed. Here we shall pursue our search for the explanation of behaviour in terms of mind rather than of matter and the laws which govern the material universe, believing that by so doing we are following a path that will lead to fuller understanding.

The Common-sense Explanation of Behaviour

It is, after all, in accordance with common sense to seek the explanation of behaviour in mental terms. If some one asks you why you acted in a certain way you will not treat him to a discourse on the physical and chemical processes of your body. You will rather say that you thought it was a good idea to do what you did; or that you did so because you felt angry, or elated, or afraid, or depressed; or that you had a strong desire to do it. The reason you give for your behaviour, whatever it is, will be in terms of mind, and you will hardly doubt that you are on the right lines in seeking the motives of your behaviour in your own mental states. Common sense is not to be despised, even in psychology, and the common-sense explanation of behaviour is right, so far as it goes. We shall see later, perhaps, that it does not go quite far enough in laying bare the real motives of all our behaviour.

Finally, let us ask what common-sense explanation we apply to the behaviour of other people. If you see a man get red in the face, clench his fists, and strike his neighbour, you will say at once that he must be very angry. But how do you know? That might conceivably be his way of showing his affection for the person he strikes. Yet you feel that this must be nonsense, and you can argue for your point of view as follows: "I know that when I am angry I behave in that way, or, at least, I have an impulse

to do so. All men are much the same fundamentally; and when I see another behave in the way I myself want to behave when I am angry it is fair to assume that he too is angry." Of course, when another living creature is far below us in the scale of life the argument becomes dangerous. Are we sure that a wasp stings us because we have annoyed it, as we so often say? We cannot really be sure. The writer remembers a magnificent sentence from a story-book of childhood's days: "Rage and dismay were depicted on the hen's countenance." As psychologists, we may well doubt whether a hen can have a feeling akin to our dismay. But explaining the behaviour of another by reference to our own experience is quite a valid proceeding so long as we can be reasonably sure that the other is a being much the same as ourselves. We see, then, that the explanation not only of our own behaviour but also of the behaviour of others can most usefully be sought in terms of mind.

QUESTIONS AND EXERCISES

1. If you have access to a library containing books on psychology, collect a few definitions of psychology and compare them with the one given here.

2. Give examples of (a) positive sciences and (b) studies concerned with values.

3. Find your own examples of behaviour and mechanical action and bring out the difference between the two.

4. Select any plant or any animal and satisfy yourself that it has the characteristics of living things enumerated at pp. 12, 13.

5. Consider what you did on the last occasion you had time to yourself and ask yourself why you did it.

6. How would you explain the behaviour of a man who gets off a bus without having paid his fare?

7. What is an hypothesis? Give examples from (a) everyday life and (b) physical science.

SUGGESTIONS FOR FURTHER READING

DREVER: *Introduction to the Psychology of Education*, chapter i.

JAMES: *Text Book of Psychology*, chapter i.

McDOUGALL: *An Outline of Psychology*, chapters i and ii; *An Introduction to Social Psychology*, chapter i; *The Energies of Men*, chapters i and ii; *Psychology* (Home University Library), chapter i.

ROSS: *Groundwork of Educational Psychology*, chapters i and ii.

SANDIFORD: *Educational Psychology*, chapter i.

STOUT: *The Groundwork of Psychology*, chapters i and ii.

WATSON: *Psychology from the Standpoint of a Behaviourist.*

Chapter II

EXPERIENCE AND THE UNCONSCIOUS

OUR decision to seek a mental explanation of behaviour involves us in the duty of exploring a little more fully what is involved in the notion of mind. Our object in the present chapter is to understand the two main aspects of mind that we have named in its title.

Experience

We referred to the first of them when, in our discussion of common-sense motives of behaviour, we spoke of 'mental states.' A person's mental states, such as his anger or fear, or any other feeling, his desiring or striving or willing, his knowing or thinking or reasoning, constitute what is called his experience. A feeling of fear, the understanding of a mathematical proposition, and the decision to tackle the difficulties of psychology are all experiences. It is impossible to define experience; we can only give examples, and add that it is in our experience that we see the functioning of our own minds. Experience has a subject and an object, for there is no experience unless there is some one experiencing something. If there is an experience of pain it must be the painful experience of some one—that is to say, the subject. And if some one says to you that he desires, you regard his statement as incomplete and ask him to state the object of his desire.

Observation of Experience

By looking within we can, as it were, see our own experience: we can take a look at our anger, for example, and to some extent give a description of that particular

experience. This "notice which the mind takes of its own operations"[1] is called introspection. Introspection is of great importance as a method of psychological study, but the obvious advantage it possesses—namely, that we can make observations whenever we please—is offset by several disadvantages. (*a*) The observer and the observed are the same; the observation of our experience is itself an experience. (*b*) The more material we have to observe, the less power we have to observe it: thus, if I am furiously angry, I am in no fit state to make calm observations on the experience of anger. (*c*) The effort at introspection inevitably changes the character of the experience, and we cannot be sure that what we do observe is what we set out to observe. It is, as the American psychologist, James, said, "like trying to turn up the gas quickly enough to see how darkness looks." (*d*) We can observe only our own experience, not that of other people. These disadvantages impel us to seek other methods of study, but they do not justify the entire neglect of introspection that is characteristic of the behaviourist school of thought.

Aspects of Experience

One established result of introspection is that three different aspects of experience can be distinguished—namely, knowing, feeling, and striving. Let us consider an example. If you see a man beating a dog your seeing his action and your recognizing it for what it is constitute a *knowing* experience. If you feel angry or disgusted you have a *feeling* experience; and if you try to snatch the whip from his' hand you have a *striving* experience. Or, to take another example, as I write these words presumably I *know* what I am writing about; I am *striving* to make the matter clear to the reader; and I have a *feeling*

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[1] John Locke.

of pleasure or annoyance according as I do or do not find the right words to express my meaning. All our experiences can be analysed into knowing, feeling, and striving; that is to say, every experience has its knowing, feeling, and striving aspects. The reader should convince himself of this by introspecting any experience of his own.

It is important to realize that an experience is never one of pure knowing, or pure feeling, or pure striving, although it may be mainly one of these. You might think, for example, that your understanding of the present chapter is an experience of pure knowing; but you will, if you look for them, find the elements of feeling and striving lurking in the background. Feeling enters into the experience, possibly as annoyance or anger, possibly as pleasurable interest; it is at least certain that there will be some feeling attitude. Striving too is there; perhaps you are trying hard to understand the argument, or, having understood it, perhaps you are trying to apply it or are resolving to teach it to some one. The element of striving will not be absent, whatever shape it may take. Thus your knowing experience is not purely but only predominantly one of knowing. Similarly, if you are beside yourself with anger your experience is not purely one of feeling. Since you will know what you are angry at and will want to do something to give expression to your anger, your experience, having its knowing and striving aspects, is only predominantly one of feeling. Lastly, if you are 'going all out' to win a race, do you then have an experience of pure striving?· No, for you will at least know the goal towards which you are striving, and you will have feelings of joy, elation, depression, or despair according to the degree in which your striving is succeeding: thus your striving experience again is only predominantly one of striving. If the reader himself selects experiences that seem at first sight to be pure

knowing, or pure feeling, or pure striving, and examines them in this way, he will easily convince himself that knowing, feeling, and striving do not exist in their undiluted states.

Importance of Experience

I may doubt the existence of the external world, as some philosophers have done, but I cannot doubt my own existence, for I know that I am a subject of experience. Certainly I can have no knowledge at all of the external world except through my experience—either my own direct observation or my understanding of the findings of others. Further, as we have already seen, my experience supplies to me the most direct clue to the interpretation not only of my own behaviour but also that of others. I cannot even begin to understand behaviour except in the light of my own experience. My experience is, for me, the most fundamental of all facts.

Awareness of Experience

Our power of introspection implies that we are aware of our own experience. Not only can we feel fear: we can also know that we feel it. Probably this is one respect in which our mental life is on a higher level than that of the animals. We should understand clearly, however, that we cannot know or apprehend all our experience. At any one time there are parts of experience that are below the level of awareness. The action of the heart and that of the digestive organs, for example, are all the time contributing items to the sum-total of experience, but we are normally unaware of them. The field of experience is vast, and we can apprehend only a small part of it: the part we do not apprehend we call subconscious or unapprehended experience. But there seems to be a

tendency for all experience to rise to the level of awareness, a tendency which is crystallized in the law: "Every experience tends to be apprehended." [1]

Flux of Experience

Experience is constantly changing. It has often been compared to a stream which flows on and on, never at rest, the same combination of drops of water never passing the same place twice. This fact gave considerable worry to an old Greek philosopher, Heraclitus, who said: "You cannot step twice into the same river." His followers went one better and said that you could not step into the river even once, as it kept moving even while you were stepping. But we feel that this cannot be the whole story about the mind. We may admit that our experience is in a state of continual flux, yet feel that we ourselves are relatively stable, just as the bed of the stream remains relatively permanent although the water is for ever flowing. This consideration leads us to see that experience cannot be the whole mind: there must be a background to experience of a more or less stable character.

The Unconscious

This relatively stable background of the mind is called the unconscious—that is to say, the 'not-conscious,' that which is not experience. We may define the unconscious quite simply as the seat of motives. When we agreed that the common-sense explanation of behaviour in terms of mental states, or experience, was correct so far as it went, we warned the reader that it did not go far enough. We must delve deeper to find the real motives of behaviour. It is probably true to say that our modes of behaviour, and the experiences which accompany them and seem to

[1] Spearman.

occasion them, have common motives in the unconscious. Experience is only the movement on the surface of the mind, like the waves on the surface of the ocean whose depths are beyond our direct observation. The hidden depths of the mind are the unconscious. We must be clear that by the term 'unconscious' we mean something that is different in kind from all experience, whether it is the experience of which we are fully aware or the unapprehended or subconscious experience to which we have already called attention.[1] The unconscious is not experience; it is the seat of motives, and we must think of it as a storehouse of dynamic energy which motivates all our behaviour and all our experience. No intro-spection, however deep, will reveal it to us: we cannot observe it directly as we can observe experience. But it is a necessary hypothesis in our quest for an explanation of behaviour, one which we shall endeavour to justify as we proceed. Meanwhile we go on to analyse the powers which we assume it must possess.

Retention

One very obvious power which we must attribute to the unconscious is that of retention. In the familiar experience of memory we have this power risen to the level of awareness, for when we remember anything we apprehend the fact that our present experience bears a special relation of likeness to one that is past. Without such a power we should be unable to remember or recognize anything. The fact that we can do so implies that experience leaves something behind it which is retained. But we retain much more than we can remember. Experiment proves that if a person learns a series of nonsense syllables, although he may be unable to

[1] See p. 21.

remember them, or even recognize them when he sees
them again, he will at least relearn them with less
expenditure of time and effort: this again indicates
that something has been retained from the original .
learning. We should be clear that it is not the ex-
periences themselves that are retained, but certain after-
effects. We shall refer to such after-effects of experiences
as 'dispositions.'

In virtue of this power of retention we are our own
history: the after-effects of all our experiences are
retained, and there is no reason in theory why it should
be impossible to remember anything that has ever
happened to us. But not only do we retain in our un-
conscious the dispositions resulting from our own private
experience: we also retain dispositions from the experience
of our remote ancestors, as we can realize when we
consider the fact that we grow and develop not in random
fashion but in the form characteristic of our race. In
our next chapter we shall consider further evidence of
dispositions resulting from ancestral experience.

Clearly, animals also have the power of retention, for
there is no animal, however lowly, that is entirely devoid
of the power to learn by experience. Further, what we
call racial memory in animals provides an example of
their power to retain dispositions from the experience of
countless generations of their ancestors.

The Life-urge

The unconscious, however, must never be thought of as
a mere storehouse of dispositions. We have already seen
that it is dynamic, active, the source of motive-power.
To this dynamic aspect or drive of the unconscious various
names are given, such as the life-urge, the *libido*, the
horme, the *élan vital*, the will-to-live, mental energy.

We shall select the first of these names and refer to the drive of the unconscious as the life-urge. The characteristics of living things which we enumerated [1] provide examples of it; and when we experience any striving, desiring, or willing we have it manifest at the level of awareness. In our bodily activities such as breathing, blood - circulation, digestion of food, battling against disease-germs, we have the life-urge at work below the level of our awareness of it. Doubtless the reader will be able to supply further examples, not only in the life of man, but also in that of animals and plants.

Relations between Retention and the Life-urge

For reasons of convenience we have discussed the power of retention and the life-urge separately. This, however, must not lead us to think that they are separate in reality: they can be thought of separately, but they are both merely aspects of the one unconscious. In our study of psychology it is necessary, as a rule, to study first one aspect of mental activity, then another: but in doing this we must always remember that we are dealing with one mind and never, in our study of individual trees, lose sight of the wood. Retention and the life-urge work in conjunction with one another. The dispositions are not dead deposits, or mere relics of past experience, but are themselves highly charged with energy: that is to say, they are vehicles of the life-urge. They become active motives of new experience and behaviour in virtue of a third power of the unconscious which we shall now consider.

Cohesion

We have a most important example of the working of the life-urge in the perpetual striving of the unconscious

[1] See pp. 12–13.

to preserve its own unity. To this striving after wholeness we give the name 'cohesion.' The dispositions left behind by experience do not exist separately, but, by cohering with one another, themselves become powerful motives of further experience and behaviour. We call such a unification of dispositions a 'complex' [1]; complexes, in turn, cohere with one another to create larger unities in the unconscious.

The question arises whether dispositions cohere or associate with one another in a random way or according to any principle. The fact of association has been recognized for a long time, and the psychologists who stressed it almost to the exclusion of other equally important facts are known as the 'associationists.' They thought that they had discovered the principle of association: according to them cohesion did not take place by mere chance, but as a result of experiences that happened together linking up with one another. There is, of course, truth in such a view: if you remember one event of yesterday afternoon you are likely to remember others. But in the long run it is not the happening together that is important in determining the permanent cohesion of dispositions into complexes, but rather their mattering to or interesting their possessor in a particular way. Common interest is the main principle determining cohesion. The reader can easily test the truth of this statement for himself by starting with an idea and seeing to what other ideas it will lead if he allows his mind to wander as it will.

We make use of the power of cohesion, and are aware of it, every time we try to learn something. But cohesion goes on in the unconscious whether we are aware of it or not, always according to the principle of interest.

[1] The reader will learn later (p. 67) that this word is often used in a special sense.

Consolidation

There can be no doubt that dispositions need a little time to settle down before firm cohesion takes place. This fact was referred to by James when he said, paradoxically: "We learn to skate in summer and swim in winter." By 'consolidation' we mean the cohesion that takes place during an interval of rest rather than one of learning or practice. The reader may perhaps have been surprised to find that a period of rest results in an improved performance of some skilled action. "Practice makes perfect" is not the whole story: we can practise until we become stale. The dispositions resulting from our practice, however, consolidate when other matters are occupying our attention, and it is the complex so formed in the unconscious which motivates the improved performance. Consolidation takes place most readily when the activity is one in which the performer strongly desires to excel: here again we have the principle of interest.

It has been proved by careful experiment that children remember poetry best after an interval of two days. In this we have a clear example of consolidation. We have another in the familiar experience of trying to remember something—a name, for instance. We give up the attempt and think of something else; then, quite suddenly, the wanted name saunters, as it were, into our experience. The dispositions formed by our efforts to remember have been gathering themselves together and cohering into a complex whole which, when ready, occasions the memory of the name. And a problem whose solution has baffled us at night may yield at once to a further effort in the morning.

It is wise as a matter of mental economy to take account of the fact of consolidation and to allow time for the

necessary cohesion to take place, whether our task is writing an essay, preparing a speech, or taking an examination.

Learning by Experience

Our ever-flowing stream of experience results in the steady accumulation of dispositions in the unconscious and their unification with those that are already there. Here we have the basis of our learning by experience. Let us examine what is implied in the familiar proverb: "The burnt child dreads the fire." The child is naturally attracted by the bright, glowing object; he has a natural impulse to approach it and get fuller knowledge of it, and one day, in spite of parental vigilance, he may touch the fire and receive a burn. This painful experience, of course, leaves dispositions which, in accordance with the principle of interest, attach themselves to the complex which motivated the touching of the fire in the first instance; and they alter that original complex so profoundly that on all future occasions the child will avoid rather than approach the fire. His original nature has been modified as a result of experience.

Meaning

Another way of stating the same facts is to ask what, for the child, is the meaning of the situation. Now the meaning of a situation is not primarily what is known of it, but rather what is to be done about it. The meaning of the fire for the child, in the first instance, is that it is something which must be approached and examined: we call that the primary meaning of the fire for him, since it is the one dictated by his original nature. But after the burning the meaning of the fire is that it is something

to be shunned: that is its secondary meaning. It should be clear that experience results in the accumulation of secondary meanings of situations, and that these secondary meanings continually become fuller and more elaborate as life proceeds.

QUESTIONS AND EXERCISES

1. Give some examples of what is meant by 'experience,' noting in each case the object of the experience.

2. Why do the Behaviourists neglect introspection?

3. Choose any experience and satisfy yourself that it has the three aspects of knowing, feeling, and striving. Which of the three is uppermost in the experience you have selected?

4. Show that your knowledge of, say, an apple is brought to you through your own experience.

5. Give examples of (a) experiences of which you are fully aware, and (b) subconscious experiences.

6. Find your own examples of (a) the life-urge, (b) the mind's power of retention, and (c) racial memory.

7. Think of any article such as a pen and let your mind wander freely. Try to account for the ideas that follow one another.

8. Give your own instance of improvement that has taken place during an interval of rest from practice. How do you account for it?

9. Give an example of your own learning from experience and try to state how it took place.

SUGGESTIONS FOR FURTHER READING

DREVER: *Introduction to the Psychology of Education*, chapters ii and iii.

McDOUGALL: *An Outline of Psychology*, chapters i and ii; *An Introduction to Social Psychology*, supplementary chapter vii; *Psychology* (Home University Library), chapter i.

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapters ii, iii, iv, and v.

ROSS: *Groundwork of Educational Psychology*, chapters ii and iii.

STOUT: *The Groundwork of Psychology*, chapters i and iii.

Chapter III

INNATE MOTIVES OF BEHAVIOUR

IT was suggested earlier that all experience leaves behind it after-effects, or dispositions, in the unconscious; and that such dispositions cohere with one another into complexes which constitute motives of behaviour and further experience. We must, however, realize that the motives in a person's unconscious are not there solely as a result of his own experience. Some motives are innate, or inborn; they are there by nature father than as a result of our individual nurture. We have inherited them from countless generations of our ancestors, whose collective experience is, as it were, capitalized for our use. Thus we must not think of the unconscious as a mere blind urge at the beginning of life which drives us to have commerce with our environment, to respond to situations, in a random fashion. To accord with the observed facts of behaviour we must rather think of the unconscious as being organized from the start into motives of a relatively specific character. It is the purpose of the present chapter to examine these motives with which we are born.[1]

The Safety Motive

Before we attempt to describe the general characteristics of innate motives we shall examine one that is very familiar—the motive to seek personal safety in a dangerous situation. It will be readily agreed that such a motive is

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[1] While innate motives of human behaviour are called 'instincts' by many writers of repute, the present writer has come to the conclusion that it is wise to restrict the use of the word 'instinct' to the relatively fixed modes of behaviour which the lower animals exhibit under given circumstances.

deeply rooted in all human beings. We do not have to learn to seek our own safety; rather have we to learn not to seek it when other more important issues are at stake. At all times this safety motive is dormant in our unconscious, ready to become active when danger threatens. If, as you sit quietly reading, you hear the whine of a falling bomb, or even the doleful wail of the siren, you cannot be indifferent, as you might be, say, to the sound of a train.

The safety motive is always ready to direct your notice to things which threaten your personal well - being. When it is active you feel at least a momentary qualm of fear, and you experience a strong impulse to take some steps that will ensure your safety. In the case of the falling bomb most people, without taking thought, react by lying face downward on the ground. There are certain common modes of behaviour in dangerous situations to which we seem to have a natural inclination, such as (a) running away from the danger, (b) hiding from the threatening object, (c) becoming completely still, and (d) performing without thought just the right action with our hands, or, indeed, with our whole bodies, that will extricate us from the danger. Probably the reader may be able to supply his own instances of this extra manipulative dexterity which is quicker than thought when the need arises, and possibly he will think of reactions to bodily danger other than those which have been mentioned.

How Innate Motives Work

The points we have just made about the safety motive apply to all innate motives. First of all, we must note that motives are not active all the time: normally they lie dormant until some situation stirs them into activity.

We are not dominated continually by the safety motive, for example: it needs a real or at least an imagined situation of danger to evoke it. Secondly, just as the safety motive prompts us to seek the goal of our personal safety, so does each of the other motives impel us towards a more or less clearly defined goal. Thirdly, the innate motives determine not only behaviour, but also experience. We saw in the last chapter that this is true of all motives, whether they are innate or not. Innate motives are not blind drives: each of them determines a particular sort of experience which makes us aware of the motive when it becomes active. In the case of the safety motive we are acutely aware (*a*) of the object which threatens us, (*b*) of the feeling of fear, and (*c*) of the impulse to seek safety. These three aspects of experience—(*a*) knowing, (*b*) feeling, and (*c*) striving—can be discerned in the working of all innate motives. Let us examine them in turn.

(*a*) The safety motive, as we have seen, impels us to attend to a threatening object: by our very nature we cannot be indifferent to objects which menace us. During the war a siren wakened us from a deep sleep, and most people in much-bombed localities developed an acute sense of hearing where aeroplanes were concerned. In exactly the same way all our innate motives impel us, as we shall see, to notice or pay attention to certain aspects of our environment, while we remain indifferent to others which might have an equal claim on our attention.

(*b*) Just as the feeling-experience which we call fear tends to accompany the activity of the safety motive, so do all the innate motives tend, when active, to determine a characteristic feeling-experience. But while the feeling in each case tends to be of a specific character, it would be wrong to suppose that there must be a rigid connexion

between particular modes of feeling and innate motives. We can say, however, that there is normally a perturbation of feeling which assumes a definite colour when the goal of the activity is not immediately attained.

(c) In the same way as the safety motive drives us to the appropriate action in a dangerous situation, so do all innate motives dispose us to modes of action that are calculated to reach their goals. We should, however, understand quite clearly that no one specific, stereotyped mode of behaviour is prescribed by each innate motive, at least in the case of human beings. We have seen several modes of action.appropriate to the attainment of safety, and the reader himself will doubtless be able to supply others. While the goal of any innate motive remains constant in a broad sense, the behaviour by means of which that goal is sought is variable. When an innate motive is active we adopt any mode of behaviour that leads in the direction of the goal. If we do not have a relevant mode of action ready, the motive drives us to try one after another until we find the one that gives the right result. An innate motive, then, does not compel us to do some one thing in response to a situation, but rather to go on experimenting with actions until the goal of the motive is reached. For this reason we must describe innate motives in terms of the goals which they seek, in terms of their biological purpose or consummation, not by modes of action. It is better to talk of the safety motive than of the flight motive, for, as we have seen, flight is only one of many means of seeking safety.

To sum up these important conclusions, we may say that our innate motives to seek certain goals, when made active, incline us (a) to notice one thing rather than another in our environment; (b) to feel more or less strongly, especially when the goal is not being immediately

attained; (c) to perform actions that will bring us nearer the attainment of the goal.

Classification of Innate Motives

Before we attempt to enumerate the principal innate motives of human behaviour we ought to remind ourselves that the temptation to divide the mind up into neat compartments must always be resisted. The mind, being a unity, is not divisible into well-defined, self-contained sections. Thus the more or less specific motives which we shall mention in addition to the safety.motive are only ways in which we see the one mind at work. If we realize that they are merely different aspects of the one fundamental life-urge we shall not expect to find them sharply demarcated from one another; they overlap, and no classification of them can ever be rigid. Any attempt we make to give names to certain innate motives is nothing more than a matter of usefulness or convenience : it is no assertion of their separate, independent existence.

Bearing this well in mind, we may consider a very broad, threefold classification of innate motives that is commonly put forward. (a) There are those innate motives which in the main make for the preservation of the self. These we label 'self motives.' (b) There are those which make primarily for the preservation of the whole human race. These we call 'race motives.' (c) There are also those which are concerned with the well-being of the herd of which the individual is a member. We refer to these as 'herd motives.' Now, it will be seen at once that these three broad sets of motives are not rigidly separate, or completely independent of one another. Our safety motive, for example, while it is primarily a self motive, is clearly not unconnected with both race and herd motives. Obviously the interests of

both the race and the herd are served by the preservation of the individual. But in this threefold classification we do have a broad, though not a rigid, classification which may help us to get our ideas clear. We can, in fact, go farther than the assertion that there are self, race, and herd motives: there is, as we shall see in a moment, a known equipment of human motives that can be described in greater detail.

Are Innate Motives a Reality?

Before we attempt the description the question arises whether we can be sure that there are any motives of human behaviour that are certainly innate. If we could see them at work in the behaviour of a newly born infant we should, of course, have no doubt. But in practically no case have we any such proof. If motives, however, manifest themselves at times in all human beings, regardless of race or nurture, we can be reasonably sure that they have been there in germ from the start. If, further, we have evidence of the same motives at work in the behaviour of the higher animals, such as cats, dogs, and horses, we can reasonably infer that we have inherited them from pre-human forms of life, and that therefore they are deeply rooted in our nature. The reader ought to satisfy himself that these two considerations apply to the motives which we now proceed to enumerate. In each case he ought also to ask himself how far his own experience of himself and others confirms what is said, not, however, expecting to find all the motives of equal strength in all the individuals with whom he is acquainted.

In addition to the safety motive there are three others that are almost universally recognized as innate motives. These are the food-seeking motive, the motive of combat,

and the sex motive. We shall describe these first before going on to others which, in most quarters, are also allowed to rank as innate motives.

The Food-seeking Motive

Food-seeking is clearly the first requirement of self-preservation. It concerns the self rather than the race or the herd. No one will doubt that food-seeking is an innate motive, for it is manifest in the behaviour of the newly born infant. Its aim is, quite simply, to seek and devour food. It is aroused to activity (a) by the sight or the smell or even the thought of food; and (b) by a certain state of the digestive organs. In so far as it is aroused by a state of the body we call it an appetite. The feeling-experience we have when it is active, so long as we have not had the food we seek, is hunger; while the feeling of enjoyment we have when we are satisfying hunger may be termed 'gusto.' The impulse we experience is first to secure food, then to devour it.

The Motive of Combat

Again, few will doubt that the urge to fight is native in the human race. What arouses it? A hungry dog shows fight if its food is interfered with, and we have a proverb about the fierceness of a bear robbed of her whelps. In human beings we may say generally that the motive of combat is made active by any opposition to an activity which we are pursuing, especially if the dynamic behind that activity is any other innate motive. Thus the motive of combat may serve the interests of the self, the race, or the herd. The feeling-experience which accompanies it is anger, so long, at least, as the obstruction persists; and the goal is primarily to break down the opposition

rather than to kill or harm the person who is hindering our activity, although that may certainly be an effective means of getting rid of the obstruction. The motive, if not evident in the newly born infant, at least appears at a very early stage in life.

The Sex Motive

Again, it will be generally agreed that men and women have a deeply rooted impulse to seek out and have sexual relations with a mate. This impulse, though not directly evident in the early years of life, normally and inevitably makes its appearance in the years of adolescence. It is aroused to activity (*a*) by the presence of a suitable member of the opposite sex, or by the thought of such a member; and (*b*) by a state of the body. Thus, like the food-seeking motive, it is partly an appetite. We have to describe the feeling-experience that accompanies it, quite bluntly, by the word 'lust.' The impulse is to seek the presence of and ultimately union with a mate. It need hardly be pointed out that, although its operation brings self-gratification in its train, its biological purpose is the continuation of the race; while the herd of which the individual is a member provides a field for the selection of a suitable partner.

The Motive of Repulsion

This is a very simple motive which is made active primarily by the presence of something nasty in the mouth, and, to a less extent, by an unpleasant sight or smell. The feeling that goes with it is disgust; and the impulse is to eject the offending article from the mouth, or, in the other cases, to avert the eyes or the nose. Clearly it is concerned with the well-being of the self: it may,

in fact, be regarded as a corrective to food-seeking. Indiscriminate food - seeking would soon lead to our poisoning ourselves; fortunately most noxious substances have a nasty taste and therefore bring the repulsion motive into operation.

The Parental Motive

This motive is, according to McDougall, "Nature's brightest and most beautiful invention." It is purely altruistic, being concerned not at all with the self, but only with the race. It is aroused primarily by the sight or the thought of one's own offspring, especially if they are in distress; but also, in most human beings, by all children, indeed by all whose weakness and helplessness call for protection. The feeling that it brings in its train is best described by the word 'tenderness,' and the immediate goal is the protecting and comforting of the young. No decent person can be indifferent to a child in distress: when he encounters one he experiences quite a strong impulse to lift the child in his arms, comfort him, and give him a piece of chocolate or a penny to buy chocolate. Clearly this parental motive is connected with that of sex; it ensures that when children appear they will be cared for.

The Motive of Appeal

This motive is closely connected with the parental motive. If you pick up a kitten and hold it tight it will first fight to get away; when this does not succeed it will mew pitifully, so arousing the parental motive of its mother, who, if within earshot, will come on the scene to deal with the situation. The appeal motive becomes active when combat fails to deal with an obstructive

situation: its goal is to obtain necessary assistance through the cry of appeal, and the feeling-experience is distress.

The Motive of Curiosity

Here we have our innate drive to become better acquainted with our environment. We see it at work in the animal world: we have a saying to the effect that curiosity killed a cat, and we are told on high authority that the elephant's child was "full of 'satiable curiosity." Little children are intensely curious, continually seeking to extend their knowledge by exploring and asking questions. Curiosity is aroused by anything unusual in our environment; it disposes us to the feeling we call wonder, and its goal is fuller knowledge of the unusual feature of the environment, a goal which, in simple cases, is reached by approaching and examining it. Man is insatiably curious, and all his science and philosophy spring from this innate motive of curiosity.

The Gregarious Motive

Not all of the higher animals are gregarious. Dogs do hunt in packs; and the behaviour of the domestic dog who seeks his master's company and approval, and shuns his disapproval, is probably a consequence of the gregariousness of the dog family. But the cat walks by its wild lone: it is not gregarious, and the glorious dignity and independence of the domestic cat are due fundamentally to this fact. Probably the motive is innate in the human race: "man is by nature a political animal," as Aristotle said long ago. Gregariousness is aroused by the sight or thought of others; it is accompanied, until satisfied, by a feeling of loneliness or nostalgia, and its

goal is to be in the company of one's fellows.   Clearly it is the basis of the herd motive.   It should be noted that, while gregariousness is at the root of all social behaviour, it does not necessarily issue in lofty forms of altruistic conduct.   We all know people who are so gregarious that they are miserable unless they have some one to quarrel with.   Gregariousness by itself cannot result in organized society without the aid of the two motives which we shall now consider.

The Motive of Self-display

This motive has reference to the herd, for it is aroused by the presence of fellow-creatures whom we deem inferior to ourselves.   The feeling which accompanies it is elation, and the impulse is to strut, 'show off,' display strength or beauty, and generally have one's superiority recognized. The goal of the motive is a position of dominance in the herd.   That it is deeply rooted seems certain.   We see it in the peacock, for example, and it is also manifest at early stages of human development in the innocent self-display of little children.   The reader will agree that self-display is not unconnected with the sex motive: members of both sexes have an urge to appear at their best in the presence of members of the opposite sex.

The Motive of Submission

If every one was striving all the time for opportunities of self-assertion organized society would still be impossible. Fortunately nature has provided a complementary motive in submission.   This motive becomes active when we are in the presence of others whom we recognize as our superiors: we have a feeling of submissiveness when we are in such a position, and are impelled to adopt an

attitude of deference, to obey orders, to submit to authority. Like self-assertion, submission is an offshoot of gregariousness, though clearly it too is connected with the sex motive. Who has ever seen a submissive cat? The dog, however, on his return from an expedition on which he has done many things that ought not to have been done, gives himself away by crouching and cringing to his master—the very picture of submissiveness and deference. Little children are assertive and submissive in turn, and this is probably true at all stages of life. The ideal social group is one where every member is the leader in one activity and one of the followers in others.

The Motive of Acquisition

This drive is aroused within us by the sight or the thought of articles we desire, especially food and material for furnishing the home. There is no very definite feeling which accompanies its working, but its goal is the acquisition of the desired articles. We see it at work in the behaviour of animals such as squirrels who store food, and those who garner material to furnish their nests or lairs. In man it is normally very strong and notoriously difficult to square at all points with the moral ideas of its possessor.

The Motive of Construction

This motive is not unconnected with acquisition, for, having acquired materials for making or furnishing a home, we have an impulse to build the home and to construct suitable articles for it. Again there is no very definite feeling which tends to accompany its working. It is seen in children when they collect materials suitable for making lairs, cubby-holes, and tree-shelters. And a

man who, generally speaking, is no craftsman, will often perform wonders when an article for the home is required.

The Emotions

In connexion with most of the innate motives we have been able to mention a characteristic feeling that tends to accompany the working of the motive. In psychology the word 'emotion' is used to denote any pronounced feeling-state along with the impulse to action which accompanies it. We reminded ourselves earlier that common sense frequently accounts for behaviour in terms of emotions such as fear, wonder, anger, or elation. Roughly speaking, the findings of the present chapter confirm such a view, but it is probably more correct to say that the emotion—that is to say, the experience which accompanies the working of a native motive—is not truly the motive of the behaviour, but rather is itself determined by the native motive in the unconscious. Common sense, in naming the emotion as the motive, calls attention to the fact that characteristic emotions come on the scene when native motives are at work. It is probably too much of a simplification to assert, as some have done, that there is a one-to-one correspondence between emotions and native motives: in combat, for example, one may feel either angry, or afraid, or both; and in strange surroundings one may experience both wonder and fear. But undoubtedly in connexion with each of the principal native motives there is one emotion rather than another which tends to appear, especially when the impulse to which the motive gives rise is not successfully reaching forward toward its goal. We become more and more angry if we are failing to break down obstruction; we become more and more afraid if we are not successfully

dealing with a dangerous situation; and we become more and more lonely if we cannot find company.

Sublimation

There is one most important difference between man and the higher animals in connexion with the innate motives common to both. In the case of the animals the goal towards which the energy of the native motive is directed is of a narrow, specific character—one that is important in the interests of the individual, or the species, or both. In man, however, the energy of the native motives may be redirected from the primitive, biological goals of these motives to ends which, while retaining their broad, general character, are of permanent individual and social value. This redirection of the energy of native motives towards valuable ends is called 'sublimation.' When Jesus told his first disciples not to fear the things that hurt the body but rather to fear the things that hurt the soul, he was urging them to sublimate the energy of the safety motive. The motive of combat can be sublimated from fighting against things that merely obstruct our selfish interests to moral indignation against all the evils that beset mankind. Sex-energy can be sublimated from its natural, biological goal to all forms of creative work, for the function of sex is to create. All our science and all our philosophy are the result of sublimated curiosity. The reader ought to consider each of the innate motives and find for himself instances of their sublimation.

Perversion

It is, unfortunately, equally true to say that the energy of the native motives may be directed away from the

natural goals towards goals that are not only of no value to the individual or his fellows but are also definitely undesirable and harmful. That is to say, the energy of the native motives may be perverted. It is well known that there are many perversions of the sex motive, and it would seem that the energy of this powerful drive, if it is not flowing in its normal, biological channels, or being sublimated in creative work, can only too easily find an outlet in practices that are degrading and hurtful. Legitimate curiosity can be perverted into the prurience and inquisitiveness that are characteristic of the 'nosey parker.' Sadism, or the tendency to take pleasure in cruelty, is to be regarded as a perversion of the motives of sex and self-assertion; while masochism, or the curious complementary tendency to find a certain satisfaction in being the victim of cruelty, may be seen as a perversion of the motives of sex and submission. The motive of acquisition, perhaps more easily than any other, may be directed away from its legitimate ends: kleptomania and miserliness are two of its well-known perversions. The task of finding further instances of perversions may again be left to the reader himself.

How Important are the Innate Motives?

If the account we have here of the innate motives of human behaviour is reasonably near the truth it provides a description of human nature in its raw state. The native motives are to be thought of as powerful sources of energy, and it is probably true to say that they constitute the ultimate foundations of character. But it would be a profound mistake to suppose that we are necessarily slaves to them: the fact of sublimation leads us to see that we can utilize their energy to achieve goals of our own choosing, each of us becoming a unique personality.

The innate motives are capable of endless modification and elaboration. It is in early life that we see most of them at work in their clearest forms: in adults the acquired motives which we shall now consider may be of much greater importance.

QUESTIONS AND EXERCISES

1. Describe your experience and behaviour on an occasion when you were in a dangerous situation.

2. Do you seek safety in the ways mentioned at p. 31? Have you noticed others seek safety in these ways? Can you think of any other ways?

3. Think of (a) objects to which you readily attend, and (b) objects to which you attend with difficulty. How do you account for the difference?

4. What tests would you apply to decide whether a motive is innate? Decide how far each of the innate motives mentioned in the chapter passes your tests.

5. Try to decide which of the innate motives are particularly strong and particularly weak in (a) yourself and (b) some one whom you know well.

6.

INNATE MOTIVE	SELF	RACE	HERD
Safety . .	1	2	3

In the above table the numbers 1, 2, 3 entered opposite "Safety," and under "Self," "Race," and "Herd" respectively, mean that the safety motive is concerned most of all with the self, next with the race, and least of all with the herd. Continue the table for all the innate motives mentioned, in each case putting the numbers 1, 2, and 3 in the appropriate compartments.

7. Are any of the innate motives 'appetites' other than food-seeking and sex?

8. Make a list of the innate motives and the emotions that tend to accompany the working of each, arranging your list in order of the degree of definiteness of the emotions. Have you any difficulty in doing this?

9. Select several of the innate motives and consider ways in which they can be (*a*) sublimated and (*b*) perverted. Examine your own innate motives from this standpoint.

SUGGESTIONS FOR FURTHER READING

DREVER: *Introduction to the Psychology of Education*, chapter iv.

JAMES: *Text Book of Psychology*, chapters xxiv and xxv.

McDOUGALL: *An Introduction to Social Psychology*, chapters ii, iii, x, xi, xii, xiii, and xiv; *An Outline of Psychology*, chapters ii, iii, iv, v, xi, and xii; *The Energies of Men.*

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapter xii.

RIVERS: *Instinct and the Unconscious.*

ROSS: *Groundwork of Educational Psychology*, chapter iv, and note at end of book.

STOUT: *The Groundwork of Psychology*, chapter xv.

Chapter IV

ACQUIRED MOTIVES OF BEHAVIOUR

THE object of the present chapter is to study our loves and hates, to see how these loves and hates come together to form our characters, and to get some light on what is involved in an act of will. After studying the innate motives of behaviour we are now turning to examine the higher controls of conduct. A normal adult exhibits general trends of behaviour that are determined not purely by motives of combat, safety, repulsion, curiosity, and so on, but by more complex motives which, on the basis of the innate motives, are acquired as a result of the commerce he holds with his environment. We saw that the innate motives are common to the whole human species: the acquired motives, however, are characteristic of the individual, and they are welded into the complex whole that we call the self. In a word, our subject of study here is the development of the unconscious, which, as we saw at an earlier stage, is the seat of motives.

Study of a Hobby

We can best begin to understand the nature of acquired motives by studying the case of a person whose behaviour exhibits a strong enthusiasm for one particular activity. Let us select the case of a person whose only hobby is music, who, as we say, lives for music. Now, the thing to note about such a person is that he is curious about all musical matters, but has little thirst for new knowledge in other directions; that he is elated when he shines as a musician and submissive when he is in the presence of a more skilled or more highly cultivated musician, but neither elated nor depressed, say, over his prowess in a

game; that he is disgusted or angry at bad music and at the shoddy performance of good, while bad poetry, for example, leaves him relatively cold; that he is acquisitive over musical instruments, scores, pictures of musicians, and so on, rather than over the things that his neighbour may wish to collect; that he wishes to construct an organ or a violin or a music-cabinet rather than anything else; that he fears the loss of his instruments or his collection of music rather than any other of his possessions; that his parental impulse is directed towards youthful musicians rather than towards young people who are unmusical; that he desires the company of musical people; and that, other things being equal, he even tends to seek a musical mate rather than one who is indifferent to music. In short, all his strongest feelings are centred on music; that is to say, it is music rather than anything else that stirs his innate motives into activity. His innate motives and their attendant feelings have thus been welded into a complex, large-scale motive round the idea of music. He was not born like this: rather has he acquired through his own individual experience a particular 'set' of his feeling life.

Sentiments

In studying a hobby, or an enthusiasm, we have been studying what psychologists call a 'sentiment.' We must, in our psychological studies, be clear about the meaning that is given to this word. Sometimes when a person delivers himself of some emphatic opinions he ends up by saying: "Them's my sentiments"; but in psychology the word 'sentiment' does not mean 'opinion.' Nor does it mean a feeling or emotion. In this, psychological usage is in line with common speech, for we feel that it is right to talk about a feeling of anger, but a

sentiment of hatred. What is the difference? The anger is a mere passing experience, while the hatred is not a single experience but a more or less permanent attitude. Sentiments are permanent parts of ourselves; they are comprehensive, large - scale motives in the unconscious.

We may say, then, that a sentiment is a comprehensive, acquired organization of motives in the unconscious which impels its possessor to experience his emotions and impulses in a particular setting, with regard to a specific object. In a sentiment we have a linking up of all or most of the innate motives with the idea of an object of which we can think. A sentiment may be compared with the solar system, the object of the sentiment being the sun, and the innate motives the planets which revolve round it. Clearly the power to form sentiments involves the power of thinking of objects; if our musician could not reflect about music he could hardly develop a sentiment towards it. Sentiments are probably not confined to man, for, as dog-lovers will rightly contend, a dog may show every sign of possessing an attitude of respect or even of love for its master. Doubtless a highly intelligent dog or chimpanzee may have a limited power of thinking of an object in its absence, and to the extent it can do this it will be able to form a rudimentary sentiment in the sense in which we have defined the term. But highly developed sentiments are to be found only in human beings.

Loves and Hates

The example we have studied in some detail is best described by calling it not a sentiment for music, but rather a sentiment of love for music. For another person might have an equally strong sentiment of hate for music. All our sentiments tend to be loves or hates. What is the

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difference between a love and a hate? It is a common-place to say that loves are akin to hates, and psychology certainly supports such a saying. Saul of Tarsus hated Christ and directed all his great energies towards the persecution of the infant Church; but his experience on the road to Damascus transformed his strong hate into an even stronger love, so that St Paul became the greatest of all the Apostles. Now, it was the same motives and emotions which were organized, first into a hate, then into a love; but Saul's emotional organization toppled over into so completely new a position of equilibrium that he became a different personality—Paul. While one has no difficulty in saying whether a given emotional attitude is a love or a hate, it is rather difficult, since the same innate motives are involved in both, to define the exact difference between them. But there is certainly a difference in the balance of these motives. A love seeks closer contact with its object, whereas a hate tends to avoid that which is hated. We can at least say that the motive of repulsion and the emotion of fear figure prominently in a hate, while they have little place in a love so far as the loved object is concerned. "Perfect love casteth out fear."

Moral Sentiments

Since a sentiment involves the linking up of our innate motives round an object of thought, it follows that we can have a sentiment towards any object of which we can think. If, then, we can think of abstract moral qualities such as justice, truth, beauty, and purity, we can have sentiments of love towards them. Similarly we can have sentiments of hate towards injustice, falsehood, ugliness, and impurity. These attitudes of love or hate towards moral qualities are called moral sentiments.

Sentiments of love and hate towards moral qualities tend to go in pairs: thus, if we have a sentiment of love for truth we tend also to have a sentiment of hate for falsehood. But love of truth and hatred of untruth are not the same thing: the former is a positive, the latter a negative principle in our lives. "A love," says Sir Percy Nunn, "since it urges one to explore and develop the riches of its object, is a principle of growth, of expansion: a hate, since its aim is to destroy relations with its object, is, so far, doomed to sterility." It is the positive loves rather than the negative hates that must be fostered if moral culture is to result. "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report: if there be any virtue and if there be any praise, think on these things." That was the advice of St Paul to the early Christians at Philippi. And in view of what has been said the reader will understand Plato's statement that the training "which leads you always to hate what you ought to hate, and love what you ought to love," is rightly called education.

How Moral Sentiments are Acquired

How do we get our moral sentiments? Perhaps there is in us, from the start, some sense of value which inclines us to love good and eschew evil, but psychology in its present state can give no account of this. We may say, however, that attitudes of love and hate are 'catching.' Clearly we develop our moral sentiments in and through our social environment; it is difficult to see how moral sentiments could develop in an individual isolated all the time from his fellows. Certain sentiments are traditional to certain societies; thus justice, courage, and sportsmanship may fairly be said to be characteristic of our own

nation. Young people, hearing such qualities extolled, and seeing them exemplified, are generally disposed to acquire them for themselves.

A sentiment is usually acquired in three characteristic stages. To begin with there is a love of a particular person—a father or a mother, a Scoutmaster or a teacher. Secondly, this love spreads to other persons who possess the qualities of the first. Lastly there develops a love for the qualities themselves, and we have moral sentiments. A young person will always tend to catch the attitudes and enthusiasms of his hero, and therefore, in the end, hold the same sentiments. We cannot realize too clearly that neither do moral sentiments grow of themselves nor are they caught from the air; rather do they begin as a love for a particular person who is an exemplar of such sentiments. There are those who maintain that we can have Christianity without Christ—that is to say, we can preserve the Christian ethic in these latter days without continued love and loyalty towards Christ himself. No doubt there may be strong spirits who can conceive of and follow abstract moral qualities as existing in their own right; but it remains true to say that the ordinary individual can best acquire a love of moral qualities by first developing a love of One in whom such qualities are perfectly embodied.

Habits

Habits are sometimes talked of as if they were motives of behaviour. But clearly it explains nothing to say that an unsatisfactory mode of behaviour is due to a bad habit, for the behaviour is itself the habit. A habit is merely a mode of behaviour which its possessor repeatedly exhibits. Behind all our habits are the innate and acquired motives of behaviour which we have been

considering. The innate motives tend to make habitual, both in the individual and in the race, those modes of behaviour which tend to result in the satisfactory attainment of the goal of the motive; thus, running away from a threatening object is a racial habit with the dynamic of the safety motive behind it, for such a mode of action has again and again resulted in the attainment of safety. The fact that innate motives tend to establish habits is made use of by those who teach animals to perform tricks. The trainer rewards the animal for a successful performance by giving it its favourite food, so enlisting the energy of the food-seeking motive behind the habit he wishes the animal to acquire.

It is equally true to say that the large-scale, acquired motives called sentiments result in habit-formation. Our musician's most deeply rooted habits will be formed in connexion with his musical activities and interests—his daily practice, his reading, his concert-going, his wireless listening, and so on. And good behaviour has no secure foundation if behind it there are no loves of moral qualities—that is to say, permanent motives for behaving well. It is not sufficient—in school, for example—to make good behaviour habitual by external means of compulsion: if the mainsprings of such behaviour are not established the good behaviour will not be permanent, but only a means of avoiding inconvenient consequences for the time being. And war shows that the best security against panic in times of danger is to possess stable sentiments which enable us to carry on our ordinary jobs. Habits, then, are the handmaidens of our purposes or motives, whether or not these are inborn or acquired.

The truth that habits are formed in the service of sentiments can be expressed otherwise by saying that sentiments make for greater stability and consistency of conduct. If we know a person's sentiments we can

predict with some confidence how he is likely to behave; and, looking at the matter the other way round, we can infer from his conduct what sentiments he possesses. If you see three people with a newspaper, the first turning to the political columns, the second looking for reports and notices of concerts, and the third scanning the sports pages, you can be reasonably sure that interest in politics, love of music, and love of sport are respectively important sentiments in their minds.

Interest and Attention

When we attend to any object we have it in the focus of our consciousness: it is, so to speak, the most brightly illuminated spot in the field of our experience, other items being less clear, others still less clear, until we come to the subconscious items which we do not apprehend at all. Attention is getting something clear before the mind. Just as with a camera we can get a blurred image clear by focusing, so we can get an object of thought clear before the mind by attending to it.

Now, why should we attend to one object rather than to another? We have already had a partial answer to this question in the last chapter, for we saw there that each of the innate motives, when active, impels us to attend to the object that awakens the motive. So, in the first place, it is our innate motives that determine the objects of our attention. We cannot help attending to such objects, and, for this reason, attention which has the force of an innate motive behind it is usually called 'enforced attention.' A similar thing is true about the acquired motives we call sentiments, for they too dispose us to pay attention to certain objects—namely, the objects of the sentiments themselves. Our musical enthusiast, for example, is always ready to attend to musical matters.

The attention which has the dynamic of a sentiment behind it is usually called 'spontaneous attention.'

We may call our motives, both innate and acquired, our interests. An interest is, literally, something which concerns us or matters to us, and this is certainly true about our native motives and our sentiments. The former, then, are our native interests, and the latter are our acquired interests. It seems best, on the whole, to reserve the word 'interest' for the unconscious motives of experience and to describe the experience itself, when the motive is active, by means of the word 'attention.' Then we appreciate the truth of the statement that "Interest is latent attention; and attention is interest in action." Interest and attention are thus like the two sides of a coin—that is to say, different aspects of the same thing. If we look at the experience we speak of attention, while if we look at the motive of that experience we speak of interest.

The Master-sentiment

In the formation of sentiments we saw the fundamental principle of cohesion at work. But cohesion does not stop with the unification of native motives into sentiments: the mind is no more a mere bundle of sentiments than a bundle of isolated, unrelated innate motives. In somewhat the same way as the three laws governing the motion of the planets discovered by Kepler were unified in Newton's Law of Universal Gravitation, so the sentiments become merged with one another in the higher unity of an all-inclusive master-sentiment.

What is this master-sentiment that can include all others? As a rule, no ordinary sentiment is capable of dominating its rivals. If I have a love of music and also a love of open-air pursuits, for example, the one will

hardly include the other: rather on many occasions are they likely to conflict, urging me to different and incompatible courses of action. But if I know myself as a lover of music and of open-air pursuits, a hater of ugliness and injustice, and so on, I have in this self-knowledge a principle of unity among all my sentiments and all my motives. It is only the sentiment organized round the idea of self that is capable, from its very nature, of including all other sentiments. Thus the master-sentiment is the self-regarding sentiment. Just as I can have a sentiment of love for music or sport, so I can have an attitude towards my self—that is to say, a sentiment of regard for self. But the idea of self must be clear if there is to be a strong, comprehensive, self-regarding sentiment. I must know myself as the possessor of motives, both innate and acquired. It is only if this condition is fulfilled that I can have an inclusive organization of all my motives in a master-sentiment of self-regard.

Character and Personality

A person's character is his organized self: it is just the organization of all his motives which we have in the self-regarding sentiment. A strong character is one in which the organization of motives round the idea of self is close and comprehensive, with no stray, unorganized motives acting independently of the self. The possessor of a strong character, therefore, is master in his own house, in full control of all his motives. Character is weak when the motives are not so organized and therefore act independently of the self and of one another. A person of weak character is dominated now by one motive, now by another, whichever is most active at a given time. He has no self-control.

A strong character, however, is not necessarily a high

moral character. The bold, bad man is certainly a strong though not a good character; while a person who possesses unexceptionable sentiments which are not firmly organized into a self is a weak character. High moral character must include the right moral sentiments: and psychology which, as we saw at the beginning, excludes values from its scope of inquiry cannot determine standards of right and wrong. To get such standards we must go to moral philosophy and religion.

'Personality' too is the whole self or person. Thus it is roughly equivalent to 'character' as we have defined it. The word 'personality,' however, is generally used with a social reference: in talking of some one's 'personality' we are assessing to some extent his power to impress others. A man of strong personality is one who stands out in a social setting, whose lead others follow; while a weak or colourless personality is unimpressive and ineffective in his dealings with his fellows.

The Will

While there are many difficult problems connected with the will which psychology cannot pretend to solve, the foregoing considerations provide a useful working notion of what is involved in an act of will. The main problem of an act of will can be made clear by means of examples. How is it possible for a relatively weak moral sentiment, such as love of purity, to overcome the promptings of the tremendously strong innate motive of sex? How can love of honesty be victorious over the notoriously powerful acquisitive motive? There is no doubt that we can resist the temptation to give way to the innate motives and ensure the triumph of the moral sentiments. We do this, we say, by exerting the will. But what is this will?

Sir Percy Nunn provides an excellent example of the will being brought into action. I may see a pin and pick it up. My motive for doing this may be my native motive of acquisition, or a sentiment for tidiness, or a superstition that I am ensuring a day's good luck for myself. But suppose some one comes along and challenges my right to pick up the pin. Unless I am a very submissive person I shall reply in language more or less polite that I *will* pick up the pin. What has happened? Whereas before the challenge my motive was either merely a native motive, or a sentiment, or a superstition, the picking up of the pin has now become a matter of great importance to *me*. My whole self has been challenged. That, then, is what is involved in an act of will—the bringing of the whole of the self to bear on the situation. It is not the weak moral sentiments by themselves that triumph over the strong native impulses; rather is it that the self identifies itself with the moral sentiment in preference to the innate motive. I overcome temptation by saying, in effect: "I'm not the sort of person who does such things." The whole organization of the self then rallies to the help of the moral sentiment. Thus the will is the organized self, or character, in action.

Now, this view of the will is borne out by ordinary language. If a friend is losing control of himself, 'going to pieces,' as we say, we tell him to 'pull himself together.' That is, we are telling him to bring into action whatever organization of self he possesses, to exert his will. We see it again in that masterpiece of psychological analysis, the story of the Prodigal Son. The young man, after giving full rein to all his baser impulses, "when he came to himself," said, "I will arise and go to my father."

Attention and the Will

We saw that our interests—that is to say, our innate motives and our sentiments—determine the objects of our attention. This, however, does not mean that we cannot attend to matters which are not in themselves objects of interest. By exerting the will we can focus our consciousness on objects that are not intrinsically interesting, excluding for the time being those that are. This type of attention which needs the will to sustain it is usually called 'volitional attention.' At first sight it seems to break down the dictum that "attention is interest in action": but it need not do so if we allow that the master-sentiment of self-regard, which is the dynamic behind the will, is itself our all-inclusive interest, the thing that supremely matters to us.

Development of the Power of Decision

It remains to consider how best we can develop the power of decision. It should be clear from what has been said that effective willing depends on the possession of strong sentiments firmly organized into a strong self. If we are to be strong in decision and action we must have that with which to decide—namely, a strong character. We must also know what we will, and realize clearly what it is we want to do. Further, we must regard the object of our willing as possible of attainment. It is clear nonsense, for example, to say, "I will fly to the moon to-night," for I know perfectly well that I cannot do any such thing. We can will only what we believe to be possible. Again, we must, if we will the end, will the means also. A certain amount of deliberation as to ways and means is essential: keeping the end well in view, we must consider whether this or that plan of action is

calculated to attain it. But we can, like Hamlet, deliberate overmuch. We all know people who are incapable of making up their minds, who keep saying "on the one hand this, on the other hand that," and who in consequence are in a perpetual state of oscillation and indecision. We must decide what means we shall adopt, then say, like St Paul, "This one thing I do."

Lastly, there is the law of exercise to be considered. We must practise willing: we must make our decisions and act on them, cultivating a sense of personal responsibility. And, if we are in authority over others, we ought to remember that they too have a right to develop a power of decision and refrain from guarding them overmuch from their inexperience and immaturity. Within limits it is better to decide wrongly than never to decide at all. There is more hope for the strong sinner than for the feeble person who is so afraid to do wrong that he never does anything, right or wrong. We do not, of course, wish to cultivate obstinacy and rashness either in ourselves or in others; but if we, while recognizing the need for practice in decision, remember also the desirability of due deliberation, of following out courses of action in imagination, we should not become headstrong and reckless. On the contrary, there is a reasonable hope that our decisions will ultimately be both good and wise.

QUESTIONS AND EXERCISES

1. Take a hobby of your own and consider to what extent your innate motives find expression in it.

2. Give examples of sentiments of love and hate in (*a*) yourself, (*b*) your friends, (*c*) characters in history and fiction.

3. Show by means of an example how you judge a person to be the possessor of a certain sentiment.

4. Find your own example of the truth that love is akin to hate. How do you explain it?

5: How would you explain habits such as (a) smoking, (b) listening to the nine-o'clock news?

6. How would you seek (a) to eradicate a bad habit, (b) to acquire a good one?

7. Make a list of some of your own acquired interests.

8. Give examples from your own mental life of attention that is (a) enforced, (b) spontaneous, (c) volitional.

9. Attempt a description of (a) your own character, (b) that of a friend.

10. Find an example in history or literature of each of the following: (a) a strong bad character, (b) a weak good character, (c) a strong good character, (d) a weak bad character.

11. Ask yourself who are (a) the strong, (b) the weak personalities, in your circle of acquaintances.

12. Describe to yourself what happened in an actual instance of (a) your will overcoming an impulse to wrong action, (b) your will failing to overcome the impulse.

13. How would you seek to develop will-power?

SUGGESTIONS FOR FURTHER READING

DREVER: *Introduction to the Psychology of Education*, chapters v and vii.

JAMES: *Talks to Teachers*, chapter viii; *The Principles of Psychology*, chapter iv.

McDOUGALL: *An Introduction to Social Psychology*, chapters iv, v, vi, vii, viii, and ix: *An Outline of Psychology*, chapters vi, ix, and xvii: *The Energies of Men*.

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapters xiii and xiv.

ROSS: *Groundwork of Educational Psychology*, chapter vii.

SHAND: *The Foundations of Character*.

STOUT: *The Groundwork of Psychology*, chapters vi, xvii, and xviii.

Chapter V

CONFLICTING MOTIVES OF BEHAVIOUR

WE have seen how innate motives are organized into sentiments which determine general trends of behaviour, and how these, in turn, are welded into a self which is capable of acting consistently and exerting will-power. If this were always accomplished successfully character would never fail to be stable, or behaviour predictable. But even the strongest and most stable characters fail to achieve a complete unification of all the motives and to behave consistently at all times; still more do those that are less strong exhibit 'queer' forms of behaviour, such as forgetting important matters, or making stupid mistakes, or even morbid lying and stealing. It is our task in the present chapter to study those irrational forms of behaviour which seem to be outside the control of the person's self. Their root cause is simply that, as sentiments are formed and character built up, there are stray motives which fail to be organized into sentiments, and even sentiments which fail to find a place in the main personality. Such unorganized motives are not thereby deprived of their power: if they do not function as constituents of the main self or master-sentiment they will act independently, determining forms of behaviour and experience that are at variance with the main trend of the personality. It is, therefore, the conflict between stray motives and the main self that is at the root of all abnormalities of behaviour.

Conflict in Experience

Now, of course, it is a common experience to be aware of conflicting motives. The state of mind we call 'indecision' provides an example: here we feel ourselves

urgèd first in this direction, then in that, and we cannot make up our minds which course of action to follow. We have another example in the familiar experience of anger conflicting with a feeling of tenderness; and yet another when we feel our powerful native urges to be at war with our moral ideals. Coleridge said:

> And to be wroth with one we love
> Doth work like madness in the brain,

and St Paul declared: "I delight in the law of God after the inward man: but I see another law in my members, warring against the law of my mind, and bringing me into captivity to the law of sin which is in my members. O wretched man that I am!"

Both St Paul and Coleridge called attention to the fact that an experienced conflict of motives is an uncomfortable, distressing state of mind; and it is because mental conflict is so painful and exhausting that we have a strong tendency to avoid it and an urge to establish a peace, or at least a compromise, between the warring elements. We shall return to this point later.

Conflict in the Unconscious

But we are not necessarily aware of our mental conflicts. Let us here recall the distinction between experience— that is, the functioning of the mind which we can observe by introspection—and the unconscious, which is the seat of the motives of experience and behaviour. The older psychology studied merely the former: it was the study of individual, apprehended experience, and its method was introspection. The conflicts in experience which we have instanced in the preceding paragraph were, of course, familiar to the introspective psychologists; but it needed the newer psychology of the unconscious, with its technique of psychoanalysis, to reveal the fact that

motives in the unconscious may be in a state of acute
conflict without their possessor being in the least aware
of it, the only indication of the conflict being possibly a
vague state of worry, anxiety, or moodiness in experience,
or various forms of 'queer' behaviour whose true origin
is quite hidden. Now conflict between motives means
that the mind is in a state of disunity: yet it is, as always,
striving to re-establish its oneness and to avoid the mental
distress which we have already noted. If it cannot
establish real unity between the warring elements it will
at least strive to keep the conflict well below the level of
awareness. We now proceed to consider the main ways
in which the mind seeks to deal with conflicts in the
unconscious.

Conflicting Motives unified with the Self

The only satisfactory resolution of a conflict is for the
person to become aware of it, to face up to it resolutely,
and to unify the refractory motives with his main self.
This may be compared to the establishment by negotiation
of a just and lasting peace between warring nations.
No such result can be looked for until the person knows
himself for what he is: until he is aware of the rebellious
motives and recognizes their true nature he cannot
bring them into line with other motives. But we have
seen that a state of conflict in the unconscious tends to
be concealed from the person concerned: thus it may
need prolonged psychoanalysis, with its technique of
dream-analysis, word-association, and so on, to reveal
the conflicting motives. A certain limited amount of
self-analysis, however, is possible, and the knowledge of
self thus obtained constitutes a strong reason for the study
of this branch of psychology.

A soldier, for example, may resolutely refuse to admit,

even to himself, that he can be afraid and desire to escape from danger. The consequence of this, however, may be dangerous: his safety motive, being allowed no sort of expression and having all its energy bottled up, is detached from the main personality and in a state of conflict with it; and the result may be varying degrees of mental disorder. Psychoanalysis by an expert, or self-analysis, may reveal the source of the trouble. Our soldier then must face up to the fact that part of him does wish to escape from danger; and he must find ways and means of reconciling this strong motive with his sentiments of duty, courage, and self-respect. It has been well said that the truly brave man is not the one who feels no fear, but the one who does, and who refuses to give way to it.

Dissociation and Secondary Personalities

Such a satisfactory resolution of a conflict, however, is not always achieved. The rebellious motive, or group of motives, may be so powerful that it not only successfully resists all attempts of the main self to incorporate it, but even constitutes itself a rival, becoming a secondary personality or self which takes its turn of holding the stage to the temporary exclusion of the main personality. Thus we have the phenomenon of alternating personalities, the most attractive study of which, in fiction, is R. L. Stevenson's *The Strange Case of Dr Jekyll and Mr Hyde*. These two famous characters were supposed to exist in one and the same person; they were the opposites of each other, and when the one appeared on the scene the other disappeared. This highly dramatized account of abnormality illustrates a general truth: a secondary personality tends to be the opposite of the main personality, for such opposition is the reason for its existence. Also the two personalities know little or nothing of one another,

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each having in the main its own memory: if this were not the case the person would become aware in his own experience of the conflict, and, as we have seen, he tends to avoid this awareness. Thus the secondary personality is 'dissociated' from the main personality.

There are varying degrees of dissociation, ranging from the fellow who, desiring to be "all things to all men," can make himself equally at home in a prayer-meeting and a public-house, to the one with completely dissociated alternating personalities. To some extent we can detect dissociation in ourselves. Various literary men—Stevenson and Barrie, for example—tell us that they have their material supplied by a secondary personality, "brownies" [1] or a "M'Connachie," [2] and that the main personality has merely to execute the task of putting that material into literary form.

It will be realized that dissociation of conflicting motives is no final resolution of a mental conflict: it is only a method of preventing the conflict from becoming acute in experience. We may compare it to two nations being in turn on top of and temporarily suppressing one another.

Repression

But the rebellious motive may not be strong enough or important enough to become the basis of a secondary personality. Here the self, if it does not succeed in recognizing it and incorporating it, keeps it well in subjection, just as a strong nation may keep a weak neighbour or a refractory province in order by forcible means, denying it any satisfactory life of its own. The motive is not allowed by the main self to determine behaviour and experience directly, for then the person

[1] See R. L. Stevenson, "A Chapter on Dreams," in *Across the Plains.*
[2] See J. M. Barrie, *Courage.*

would be aware of the conflict. This denial of direct expression to a motive is called the 'repression' of that motive. We must be clear that the repression is unwitting on the part of the self, and distinguish it from the conscious inhibition of impulses of which a person is quite well aware. A motive which is repressed in the sense we have indicated is often called a 'complex,' but since we have already used this term in a wider sense it is clearer to refer to it as a repressed complex or a repressed motive.[1]

Repression is a thoroughly unsatisfactory state of affairs. Since part of the energy of the self is necessarily expended in keeping the motive repressed, it is therefore not available for coping with the circumstances of life. Further, the repressed motive or complex, though it is denied normal expression in experience and behaviour, continues to be a source of energy which must find some means of expending itself. The irrational forms of behaviour which the person himself does not understand are a manifestation of repressed motives which are thereby finding an outlet; they express themselves in a number of specific ways which are of such a character that the self does not recognize them for what they really are.

Symbols

The main self, then, does not or cannot prevent a repressed motive or complex from determining modes of experience and behaviour that avoid conflicts in experience. We are not therefore surprised to learn that many of our experiences and modes of behaviour are disguises for others that would bring the conflict to the level of awareness, wearing an air of innocence which obscures the fact that they originate in the repressed complex. A

[1] See p. 26.

person may have done something of which he ought to be ashamed, yet refuse to admit the guilt even to himself. The sense of guilt is therefore repressed and denied recognition by the main personality; yet it may find expression in some symbolic action such as incessant washing of the hands—an understandable substitute for the washing away of hidden guilt. Shakespeare, with unerring psychological insight, made Lady Macbeth wash her hands in the sleep-walking scene; and Pilate called for water to wash his hands, thus trying to fortify his self-delusion that he was guiltless of the blood of the just person whom he was allowing to be done to death. Similarly many tricks and mannerisms are merely substitutes for actions which would shock our moral sense if we actually performed them.

Dreams

When we sleep our main personality, which in daytime is kept intact by conscious activity, disintegrates to a greater or lesser extent, and our repressed motives get a chance to express themselves in the events of our dreams. This is very obvious in the case of those dreams which shock our moral sense when we awake from them: we are dismayed to realize that such motives exist in us. But often we can remember nothing of a dream a few moments after we waken from it. When this is the case we may be sure that the memory of the dream would cause conflict in experience. The rapid forgetting of dreams is one of the mind's methods of keeping repressed the motives that lie behind the dreams.

Thus our dreams are a valuable index to our repressed motives: dream-analysis is a most important means of exploring the unconscious. If we wish to do this, either by our own efforts or with the help of a psychoanalyst,

it is essential to recall the events of our dreams before we forget them. We can be sure of getting the material we want only by making a sufficient effort of will to switch on the light and make notes at once, however sleepy we are; for in the morning we may remember little or nothing. But the reader is warned that the determination to carry out such a practice may lead to a habit of insomnia.

Day-dreams

Day-dreams in general admit of a similar explanation, for they too are a manifestation of those motives which are being denied proper expression in real life. Charles Kingsley exhorted his sweet maid to "do noble things, not dream them, all day long." Dreaming them all day long is the refuge of people who, for one reason or another, are ineffective in their daily lives: such people, if they are not finding satisfactory and satisfying modes of self-assertion in reality, will readily find them in fantasy. An adolescent youth, for example, who often finds it difficult to cope with the demands that life is now making on him, tends to be an 'introvert'—that is to say, his main interest is in his own thoughts, feelings, and fantasies rather than in the external world. He may be cutting a very poor figure in the world of men and things, but in his day-dreams he is cutting a very fine figure indeed, thus finding compensation for his deficiencies. Living in fantasy ranges from occasional mild day-dreaming, where the dreamer knows perfectly well what he is doing, to the state of insanity where there is complete retirement from the real world, the dreamer enjoying his delusions of grandeur unhampered by any restrictions imposed by reality. Day-dreams tend to be 'regressive' in character —that is to say, they tend to hark back to an earlier stage

of life in which the individual was well adjusted to his
environment.   They are always a refuge from a hard and
exacting world whose demands we are unfit or unwilling
to meet.

Dream Symbolism

In dreams there may be only a partial disintegration
of the main personality—that is to say, the self may still
be retaining some degree of control over the repressed
motives which conflict with it, not permitting of their
unrestricted expression.   When that is the case, in sleep
as in waking life, the repressed motives must use symbols
to disguise their true nature from the self.   Thus we get
in dreams a wealth of symbols, some of which seem to be
common to all mankind.   A king and a queen in a dream,
for example, usually stand for the father and the mother
of the dreamer.   The reader will remember that the sun,
moon, and stars in the dream of the youthful Joseph
symbolized respectively his father, mother, and brothers:
while in Pharaoh's dreams the seven fat kine and the
seven good ears of corn represented seven years of plenty,
the seven lean kine and the seven blasted ears representing
seven years of famine.   Many common dream symbols
have undoubtedly a sexual significance, a repressed sex-
urge taking this way of finding an outlet.   The common
falling dream, perhaps, symbolizes the fall in self-esteem
that would result if the repressed elements had their way.
Thus the ancient belief that dreams have a hidden
meaning that can be laid bare by a skilled interpreter is
supported by modern psychology: the old penny dream-
books were right to this extent, although they were foolish
in detail.   The reader who wishes to pursue this topic of
dream symbolism further should refer to the works of
Freud and Jung.

Slips, Accidents, and Omissions

Many accidents are not so accidental as they seem. Our slips, accidents, and omissions are frequently due to the activity of our repressed motives, and are in fact these motives in action. Sir Percy Nunn gives the example of an epidemic of breakages in the kitchen being the unconscious expression of the maid's antipathy to a scolding mistress. "The virtuous maid may be unaware of the depth of her resentment and may seek, quite honestly, to 'rationalize' the 'accidents' by attributing them to the coldness of her hands or the hotness of the water or by invoking some other plausible excuse." [1] A schoolboy's blotting of a perfectly good copy of an exercise which he has done with conscious care may be due to an unconscious attitude of rebellion against school work in general or one master in particular, this element in his unconscious jogging his elbow, as it were; while persistent forgetting of his books and apparatus may be the expression of an unconscious desire to annoy his teacher. The usages of society demand that in 'polite' letters we should write things that are not always altogether sincere, and when we find ourselves doing this we should be very careful to see that we have not inadvertently said exactly what we do mean. When we write, for example, "I am extremely sorry that I am unable to accept your kind invitation," it is fatally easy, if we are merely being 'polite,' to write 'glad' instead of 'sorry,' or to make some such unpardonable mistake. The writer well remembers a blunder he made over the posting of a letter. He had come to a decision which he feared would displease a certain dignitary in the educational world in whose eyes he wished to stand well. This great man had to be informed not later than a certain Monday. The communication

[1] *Education: its Data and First Principles* (third edition, 1945), p. 59.

of the decision having been put off as long as possible, a letter was written on the Sunday afternoon, stamped with an extra halfpenny stamp, and taken to the post-office, the virtuous intention being to drop it into the late-fee box which would ensure delivery the next day. But the writer's unconscious impelled him to drop it in the ordinary box, thus further postponing the arrival of the fateful letter. And immediately after the letter had gone beyond recall he realized what he had done.

Active Forgetting

Why do we forget? Normally we fail to remember past experiences because of lapse of time and lack of interest. These types of forgetting we may suitably call 'passive.' But there is an important 'active' form of forgetting: a repressed motive acting independently may make me forget what my main self wishes most to remember. We forget an important engagement and remember it when it is just too late to fulfil it; we forget to post important letters; and we forget names and all manner of things in ways that cannot be accounted for by lapse of time and lack of interest. A young man forgets to keep a 'date' with his fiancée—the last thing his conscious self would wish to do. He is hurt when the lady tells him tearfully that if he really loved her he could not have forgotten, but she is right in suspecting his professions of single-minded devotion to her, for there is something in him that prompted his lapse of memory, something that may well lead to trouble in the long run. Active forgetting is not due to lack of interest, but rather to too much interest of a painful nature. We tend to forget actively when memory would bring mental conflict and painful feelings in its train, either directly, or indirectly through associated ideas. Thus we may forget the names of unpleasant

people, or names which, by some involved process of association, would recall unpleasant experiences.

Compensation

We may again suspect the activity of repressed motives when a person exhibits excessive and unreasonable zeal in any direction. Here the self is, as it were, fortifying itself against the promptings of the repressed motive. Thus, as we have already seen, an excessive desire for bodily cleanliness may indicate a repressed sense of guilt; excessive prudery may be the compensation for a morbid interest in sex which the person will not admit even to himself; the rash undertaking of work which, both in quantity and in quality, is beyond the capacity of a person may be a fortification against a hidden sense of inferiority and incompetence; and intolerance of certain faults in others may be a reaction against proneness to the same faults in ourselves. Of course, the person concerned does not realize the true origin of his excessive zeals: he will find other conscious justifications for them. But if for any reason he loses self-control, and the barriers erected by the self break down, the truth will at once become apparent.

Delinquency

It is the present-day fashion to look on delinquency as a form of mental maladjustment rather than an outcrop of original sin. Although such a view may easily be overstated, there can be no doubt that delinquency is by no means always to be attributed to deliberate wickedness: rather are outbreaks of naughtiness yet another manifestation of repressed motives in action. In adolescence, for example, the powerful sex-drive, denied

a direct outlet, finds indirect expression in rebellion against the society whose taboos repress it. Similarly the self-assertive motive, if denied legitimate outlets, finds expression in anti-social conduct. Many young delinquents do not know why they commit their misdemeanours; and when they say, "Something—I don't know what—made me do it," they should not be bullied into giving false reasons. Rather should such a statement be accepted at its face-value and the appropriate forms of release for the pent-up energy sought. We shall now consider very briefly four common forms of juvenile delinquency—truancy, hooliganism, lying, and stealing.

Truancy

The cause of much truancy is probably a conflict between the deeply rooted desire to remain securely at home under the protection of parents and the desire to become independent. When truancy occurs the latter desire is uppermost for the time being, and there is a strong impulse to wander. When a normally virtuous schoolboy unaccountably plays truant we may see at work a repressed urge for self-assertion against the father and all the authority for which he stands.

Hooliganism

Hooliganism in general is quite simply explained as an unconscious attitude of rebellion against society and the standards of behaviour it sets. The slashing of railway-carriage seats, the breaking of street-lamps, and other similar acts of destruction in which all public property is considered fair game, form an admirable outlet for the repressed motives to rebellion. Such forms of behaviour are doubtless most reprehensible, and an intolerable

nuisance to society; but the community cannot be absolved from blame if it has not, in youth clubs and similar organizations, provided channels of fruitful social service for the energy thus clamouring to be expended.

Lying

There is, of course, such a thing as deliberate lying where the liar consciously perverts the truth in order to escape punishment, avoid difficulties, or win commendation. A schoolboy may accept the view that a lie is an "abomination to the Lord," yet regard it as "a very present help in trouble." In such deliberate and conscious untruthfulness there is no conflict in the unconscious, but it is a mistake to regard all lying as of this nature: much of it is, once more, due to repressed motives conflicting with the main personality. A thwarted motive of self-assertion causes 'dramatic' lies—'tall' tales in which the teller cuts a fine figure, very different from his humble rôle in real life. Similarly, in adolescence and even later a starved sex-motive may issue in extravagant lying. Frequently a girl with no admirers will invent them and tell circumstantial tales of their devotion to her. It must be realized that such story-tellers are unaware, or only partially aware, that they are not speaking the truth. One gets the impression that their stories, after they have been told once or twice, become true for them. As Lewis Carroll's Bellman said, "What I tell you three times is true."[1] In such morbid lying we have a degree of mental derangement rather than a moral fault: the cure is to be found in supplying means of expression for the repressed motive rather than in moral censure.

[1] *The Hunting of the Snark.*

Stealing

Stealing is the motive of acquisition in action regardless of the moral principle of honesty. Like lying, it may be and often is a witting, deliberate action. It is notoriously difficult entirely to sublimate the motive of acquisition—that is, to bring it wholly into line with the main self and all its moral ideas. Otherwise highly moral people may consider it quite legitimate to dodge income tax, to defraud railway companies, to keep borrowed books, and to 'win' small articles. But, again, as in the case of lying, dishonesty may be due to the activity of repressed motives that are outside the control of the self. Children, for example, whose home circumstances have deprived them of much that is due to a child, may feel an inner compulsion to acquire the property of their more fortunate companions and be powerless to prevent themselves. In extreme cases, when the motive of acquisition acts in complete independence of the self and is thoroughly out of gear, we have the kleptomaniac with his or her quite unreasonable stealing of useless articles.

There are, however, more complicated forms of stealing which have their origin in the repression not of the motive of acquisition itself, but of some other powerful motive, such as the sex-motive. We get cases of people who, strictly honest in most matters, have a powerful urge to possess themselves of a particular sort of article. Such articles will often be found to have a special, often a sexual, significance for the offender, and their nature will furnish a clue to the motive that is repressed. If any motive is denied expression it tends to be displaced by the motive of acquisition, for the simple reason that the latter is the equipment provided by Nature for getting what we want but do not have. Since all our separate motives are merely so many different channels for the one life-urge,

sinçe they all have a common source of energy, it is easy to see how the drive of a repressed motive may be deflected into the motive of acquisition.

Rationalization

The examples of strange behaviour which we have considered ought to convince us that it is idle to expect human conduct always to be ordered in the clear, cold light of reason. It is not so ordered even if we are not being urged by repressed motives. The mainsprings of action are to be found, not in reason, but in the motives, sometimes organized with the main self, sometimes not. Always the motive determines the behaviour, reason acting only as a guide. But we are unwilling to admit this: we like to think that we are rational creatures and to give, both to ourselves and others, logical reasons for acting as we do. We excuse our angry words by saying, like Jonah, that we do well to be angry; and we justify our inflicting of punishment on another by saying that it is done for his good. But when we are honest we may often be prepared to admit that the real motive is our own feeling of irritation. This tendency to ascribe our motives to reason is called 'rationalization.' It was said of the eighteenth-century political philosopher Burke that he chose his side like a fanatic and defended it like a philosopher. Here we have an example of the rationalization to which we are all prone: we bring in reason to defend our opinions and actions that have been determined otherwise. We should be aware of the tendency and realize that our rationalizations are unconscious efforts to deceive ourselves and conceal the true and often unflattering nature of our motives.

Treatment of Abnormal Behaviour

In the treatment of abnormal forms of behaviour such as lying and stealing it is of the first importance to realize that they are not rational: it is the greatest of mistakes to assume that the offender must have reasons, and browbeat him into admitting them. Their root-cause, let us repeat, is conflict of motives in the unconscious; and the general line of treatment is to find the repressed motive and get it organized with the main personality. Psychoanalysis may be necessary to lay bare the true nature of the repression. Yet the intelligent student of psychology can often make a shrewd guess as to the origin of the trouble and give helpful advice; and his limited knowledge may at least enable him to see when skilled treatment is necessary.

QUESTIONS AND EXERCISES

1. Can you detect any motives in yourself which are apt to prompt you to behave in a way of which your main self disapproves?

2. Describe an instance of mental conflict of which you have been aware.

3. Think of examples of 'queer' behaviour in yourself and others, and try how far you can account for them.

4. Do you know of anyone who seems to have different selves on different occasions? If so, give a description, and try to say what sort of a person he really is.

5. How far do you remember your dreams? Make a note of a dream when you wake from it and see how far you can interpret it in the morning.

6. Have you any examples of dream symbolism of your own? Consult books on psychoanalysis and see what dream symbols are said to be common to all mankind.

7. When you catch yourself day-dreaming ask yourself why you have temporarily retired from reality.

8. Collect instances of slips, accidents, omissions, and forgettings, and see how far you can account for them.

9. Do you know anyone who shows unreasonable zeal in any direction? If so, what do you think may be the explanation? Examine your own zeals from this standpoint.

10. If you know anyone who is habitually dishonest or untruthful try to find the explanation.

11. Ask yourself your reason for behaving in a certain way on a certain occasion. Are you sure that you are being honest with yourself?

SUGGESTIONS FOR FURTHER READING

BURT: *The Young Delinquent.*

GREEN: *The Daydream; The Mind in Action.*

HADFIELD: *Psychology and Morals.*

HART: *The Psychology of Insanity.*

HINGLEY: *Psycho-analysis.*

LOW: *The Unconscious in Action.*

McDOUGALL: *An Outline of Abnormal Psychology.*

NICOLL: *Dream Psychology.*

REES: *The Health of the Mind.*

ROSS: *Groundwork of Educational Psychology,* chapter ix.

TANSLEY: *The New Psychology.*

Chapter VI

BROAD FEATURES OF HUMAN BEHAVIOUR

MODES of human behaviour permit of a broad division into two classes—namely, conservative and creative. Sometimes our motives find expression in activities which in the main seek to cling to old familiar ways and to keep things as they are. Such activities, which we may fairly call conservative, include all the facts of habit and routine. On the other hand, our motives also find expression in experimental activities which forge ahead towards the untried and the unknown. These we call creative activities. In the present chapter we shall study in turn these two broad features of human behaviour.

The Routine Tendency

The typical manifestation of conservative activities is routine. We all tend to do again and again things that are already familiar for no apparent reason other than that we have done them before. Routine certainly provides an easier channel for the functioning of our motives than activities that are unfamiliar: it shows itself in the hundreds of actions we perform every day without troubling to think, such as dressing, eating, getting to work, doing things in a settled order, and so on.

Repetition a Fundamental Characteristic of Life

The tendency towards routine, repetition, and rhythm is a fundamental characteristic of life. Our very bodies are rhythmical in their action: we have, for example, a rhythm of sleeping and waking, and our hearts, lungs,

and digestive organs all act rhythmically. We have a sense of well-being when the rhythm is maintained, and a feeling of discomfort when it is not. Rhythm is as old as life itself: as one writer says, our bodies act "as if the waves of the primeval sea whence we came still beat in them." This is the explanation of our deep enjoyment of all rhythmical activities. Dancing, whether it is a modern fox-trot, or an exhilarating eightsome reel, or the highly sophisticated ballet, is always rhythmical. Rhythm and repetition are fundamental to music, whether it is jazz, or a Beethoven symphony, or a Wagner music-drama. Similarly, poetry is based on rhythm and repetition, sometimes obvious, sometimes subtle. The same may be said of pictorial art: in design we have exact repetition, and in a good picture we have rhythm and balance which, if less apparent, are none the less essential.

Routine at Different Ages

While the routine tendency is to be seen at all periods of life, it is specially a characteristic of old age that creative activities largely give place to those of the routine sort: those who have to deal with old people know well that they do not welcome a disturbance of their daily routine. In childhood, on the other hand, we have a curious mixture of creative and conservative activities often inextricably mixed up with one another. Children have a zest for experiment and at the same time are great sticklers for routine, etiquette, and the letter of the law. In little children we observe endless repetition of the same action. A child, finding for the first time that he can stagger across the room, proceeds to do it scores of times; anything he feels he can do he will do again and again. In the nursery he does not like to have his rhythm of bath, supper, and bed disturbed, and he will soon protest if a

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stranger introduces innovations by doing things in' the wrong way or in the wrong order. He loves games which involve the repetition of jingles such as "Here we go gathering nuts in May"; and when told a story he objects to amendment or curtailment of the text with which he is familiar. Many of the best stories for children provide an element of repetition: in the famous story of the Three Bears, for example, we have a threefold repetition both of situations and of speeches applied to the father-bear, the mother-bear, and the baby-bear.

Routine a Channel of Self-assertion

We have already hinted at the explanation of the routine tendency: it is the joy of mastery, of feeling 'on top' of a situation. The chorus in a ballad, for example, provides an opportunity for the audience to take part in the telling of the tale; and the familiar words in a story give the child a chance to feel that that story is already his. Thus routine is a channel for the motive of self-assertion: it is the easiest one open to us, much easier than the new and untried activities in which also self-assertion may be found. Here we have the explanation of the appeal of routine to young children who, because of their limited physical and mental powers, are easily overawed; and to old people who are naturally less enterprising than they once were. People of limited powers of creative and independent thought and action will always feel that they have dealt effectively with a situation when they have quoted a well-worn proverb or performed a routine action. There is no mystery about it. At any age the motive of self-assertion finds ready expression in the repetition of the familiar.

The Place of Routine

While it is undoubtedly true that man is most characteristically himself when he creates, routine has yet an important place in his mental economy. In the first place, the motive of self-assertion impels us to repeat an activity which we are beginning to master: here we have an urge to practise, and "practice makes perfect." Thus the routine activity tends to become ever a better channel of self-assertion. A boy finds self-assertion in playing a game: he is therefore impelled to play it again and again, so making it a better channel of self-expression than it was originally. Hence the routine tendency makes for perfection of performance: the self-assertion and the improved standard of performance act and react on one another. In the second place, the routine tendency results in certain actions becoming habitual and mechanical. It need not, however, reduce us to the state of robots, provided we do not allow it to get out of gear and become an end in itself. Rather ought the routine we have established in simple matters become the basis of our creative efforts. Since routine and habit make for economy of effort, they set our creative powers of thought and action free to deal with higher things. A boy cannot tackle arithmetical problems unless he has mastered his addition and multiplication tables; a man cannot write an intelligent letter if he does not know, without having to think, the meanings of ordinary words; and a pianist cannot play a piece of music if he has consciously to translate the notes on his music into the keys of the piano. If the simple, elementary actions are not matters of routine but constitute a problem each time we have to perform them, then clearly we have no time or energy left to pursue creative activities. Routine, in short, is a good servant but a bad master.

Play

The most typical manifestation of our creative activities is play. Play, however, is no simple phenomenon, and it will be wise to postpone the attempt to define it until we have discussed it sufficiently to gain some understanding of its complex nature. But we may begin by assuming that we know roughly what we mean by play and how it differs from work; and it is with such rough-and-ready notions in mind that we now proceed to outline the various answers that have been given to the question: "Why do we play?"

The 'Surplus-energy' Theory

Some say that we play in order to expend a surplus of energy left over when the serious demands of life have been met, just as an engine blows off the steam it does not require to turn the wheels. Thus play is specially a characteristic of childhood, because life makes fewer demands on children than on adults. The 'surplus-energy' theory was put forward by Herbert Spencer, the famous philosopher of the nineteenth century, and it is certainly a typical product of that mechanical age. While it may contain a certain amount of truth, it is clearly inadequate in one or two important respects. It does not explain why play takes certain well-defined forms instead of being an aimless discharge of energy; nor does it explain why, when we are tired with work, we can still find energy to play. Further, as Sir Percy Nunn has pointed out, it utterly fails to explain why, when we play, we actually improve our physical and mental powers. In a word, the theory is unsound to the same extent as the mechanical view of man is unsound. We shall see later how it may be restated in a more convincing form.

The 'Practice' Theory

If we study the play of animals we are at once struck by the fact that not all of them indulge in play. The industrious ant and the busy bee, for example, immediately set about the serious business of life; and the chicken from the start exhibits a "puritanical severity of behaviour." [1] These creatures do not need to learn, and therefore they do not play. Play is confined to the higher animals—those who, born helpless, are given a prolonged period of immaturity during which to develop their powers: this they do in play. Further, the higher up in the scale an animal is, the longer is its period of immaturity and the more pronounced its impulse to play. Moreover, animals in their play seem to be practising the serious activities of their adult lives. The kitten chasing and playing with moving objects is clearly perfecting itself in the business of catching mice, and the puppy with its sham fights is practising the art of self-defence. So play is Nature's mode of education: it is a forward-looking activity which provides practice in the skilled actions that are necessary for adult life.

How far is this plausible theory applicable to the play of man? Is the child in his play practising the serious activities of his adult life? It is clearly possible to argue that such is the case if we think of a girl nursing a doll and a boy playing at soldiers. But the 'practice' theory loses its beautiful simplicity when applied to man, for his play takes many different forms. Yet again it can be maintained that the manifold forms of play in childhood anticipate the complex activities in which the man is engaged; and that boys and girls in their play are experimenting with various occupations, unwittingly

[1] Sir Percy Nunn.

searching for and practising the one that will best/suit their powers.

The 'Racial Memory' Theory

In contrast to the forward-looking explanation which we have just considered, we have a backward-looking theory in terms of racial memory—that in our play, instead of anticipating our own adult pursuits, we are harking back to the activities and modes of life of our ancestors. When we play we are living through in our individual lives a stage in the evolution of our race, just as a frog passes through the tadpole stage on its way to full development. Certainly the theory that play is reminiscence, or racial memory, can be supported by many examples. The play that is typical of the puppy or the kitten can be explained as well by the reminiscent theory as by that of practice. Hide-and-seek, all chasing games, tree-climbing, stone-throwing, 'playing houses' in caves, the construction of shelters with any materials that are available—all of these do strongly recall the youth of the race.

The 'Emotional Release' Theory

This important theory maintains that in our play we are seeking and finding a means of release for the pent-up energy of such of our motives and their accompanying emotions as are finding insufficient scope for expression in real life. That is to say, play is 'cathartic,' or purgative, in its action. This word 'catharsis,' meaning 'purge,' is taken from the writings of Aristotle, who taught that, just as medicine purges the body, so tragedy purges the soul. When we witness a performance of *King Lear* or *Hamlet* our own emotions are released and our own

mental conflicts are finding a solution: as spectators we identify ourselves with the hero and go through the conflict with him, so obtaining an outlet for our own emotional tension and being cleansed and elevated by the spectacle.   Now, this is true not only of tragedy but also of farce.   When we enjoy the antics of a knockabout comedian and come out feeling better men we are again projecting ourselves into the part he is playing, identifying ourselves with him in his outrageous behaviour: in smashing the crockery and throwing about custard-pies with him in spirit we are finding a measure of relief from the strain which civilized standards of behaviour impose on our primitive impulses.

This notion of catharsis or emotional release goes far to provide a comprehensive explanation of play.   In our play we are finding a means of release for the bottled-up energy of our motives.   Games, for example, provide release for the energy of the motive of combat.   By nature we are fighters, so when in times of peace we are finding insufficient means of discharging the energy of this motive we find it in play.   Every game is a sham fight: in football, bridge, and chess we are pitting ourselves against opponents, and even in 'patience' we are challenging the chance arrangement of the cards.   We shall see that this notion of emotional release readily applies also to 'make-believe' play.

Need for a Comprehensive Theory

We need not pit the theories one against another, for all are necessary to explain what is a very complex phenomenon.   No one theory is sufficient in itself: they all supplement one another and can to some extent be reconciled.   The 'emotional release' theory, for instance, may be regarded as a restatement of the 'surplus-energy'

theory, the energy in question being of a mental rather than a physical character. Further, the mental energy that finds release in play is that of our innate motives which we have inherited from our ancestors, so again the 'emotional release' theory is in line with that of 'racial memory.' Again, such release of the energy of inborn motives in childhood may be seen to constitute valuable preparation for civilized life, and so to be "Nature's mode of education," as the 'practice' theory maintains. Thus in the notion of 'emotional release' we have a meeting of the backward-looking and the forward-looking theories. Moreover, if the adult activities which we seem to practise in play are simple and ancient modes of life, we may argue just as plausibly that we are recapitulating the serious activities of our ancestors as that we are anticipating our own. A boy who threw stones fifteen or twenty years ago might well have been harking back to an ancestral activity; yet at the same time he was unwittingly practising and perfecting himself in a certain type of dexterity which he was able to turn to good account in his subsequent martial activities.

'Surplus energy,' in the physical sense of the term, is the theory we can best afford to discard. It is in its neglect of motives that it is unsatisfactory: all the others look for motives of play. As we have already noted, it completely fails to explain why we play when we are physically tired. A man may return home from work tired out—much too tired to perform some household task which his wife has been saving up for him—yet readily find the energy for a game of golf. Where does he get this energy?—for it certainly is not 'surplus.' There is only one possible answer to this question. He gets it from those deep-seated wells of energy, his innate motives of behaviour. The energy which sustains the game is, in the last resort, the energy of the motive of combat,

which can be tapped readily by the golf but not by the household task. The innate motives are our reserves of energy, and play is a means of calling up these reserves.

'Make-believe' Play

'Make-believe' play is one of the commonest and most interesting features of child-life, one which is indulged in by practically all children. Now, when children 'make believe' that they are milkmen, tram-conductors, engine-drivers, teachers, parsons, and so on, they are no doubt imitating the models they find in their social environment and experimenting with life, as the upholders of the 'practice' theory would contend. But there is more in 'make-believe' play than this. It is generally true to say that in their 'make-believe' children tend to enact the parts of those who in their eyes hold dominating and authoritative positions, so finding compensation for their own weakness and subordination in real life. In 'playing at schools' every child wants to be the teacher, none the scholar. Thus there is emotional release in that the motive of self-assertion is finding the scope for its exercise that it finds insufficiently otherwise. Games of 'let's pretend' supply what is lacking in the child's environment and constitute a channel through which the energy of repressed native urges may be discharged.

Imaginary Companions

Imaginary companions are an allied phenomenon of child life in which again we may see a means of compensation and emotional release. The child creates imaginary companions who seem to be more or less real to him: always dominating them and having them in proper subjection, he is obviously compensating for his own subjection to parents and others. The lonely child

creates hosts of imaginary companions in whom he finds an outlet for his starved gregarious motive. The creatures of a well-behaved child tend to be very naughty, and their adventures are related with a due sense of horror if also with a certain amount of relish. Thus we see that the imaginary companion is created in the image of the child's repressed self: he is the complement of the child as he really is, the child as he would wish to be, everything that the child himself is not. The imaginary companion provides a valuable means of emotional release; and his character is, in fact, a reliable index to the unfulfilled and unexpressed desires of the child himself.

Children as a rule do not need much encouragement to spin their yarns to a friendly adult audience. Writers of stories for children have not infrequently got their material from children they know: *Peter Pan* and *Winnie-the-Pooh*, for example, are founded on actual child-fantasies. It is not surprising, therefore, that these tales are universally popular, and that children by projecting themselves into them can find emotional release and keen enjoyment. Sometimes, indeed, when the child has mastered the orthodox text of the story he takes it as a basis for his own extensions, accepting the hero as his imaginary companion and always "going one better" than the original teller of the tale. A child will accept Peter Rabbit as his familiar spirit and add chapters of adventures, often of a deplorable character, to those related in the book.

Fairy Tales

Barrie, A. A. Milne, Beatrix Potter, and others have set out to give us child-fantasies which are dramatizations of the unfulfilled desires of normal childhood. In our folklore, however, as part of our literary heritage, we have a

wealth of fairy tales—traditional child-fantasies which each child can remake, identifying himself, of course, with the hero. The theme of many of them is the same: virtuous young persons such as Cinderella, Hop o' my Thumb, and the Ugly Duckling are persecuted by malevolent stepmothers, wicked uncles, tyrannical brothers and sisters, and powerful giants; but they always in the end triumph over their persecutors, turning the tables, often, with the help of a fairy-godmother. Fairy tales in one sense are fantastic and unreal, but only in the same sense and to the same extent as a caricature is unreal. The essence of a good caricature is truth in exaggerated form: and fairy tales are grotesque but true pictures of children themselves. Like the child's self-made fantasies, they provide compensation, representing the child as he would like to be. He too feels that he is, if not actually persecuted, unduly dominated by elders who wish to put him to bed, or keep him out of sight on important occasions, or set him to perform disagreeable tasks; so he readily if unwittingly identifies himself with Cinderella or Jack - the - Giant - Killer. Similarly he unwittingly identifies his parents and elders with the giants and other persecutors, and in the triumph of the small hero or heroine he finds emotional release. The wicked step-mother is a specially interesting character of the fairy tale, for she is the child's own mother in her rôle of disciplinarian; while her counterpart, the fairy-godmother, is again his own mother, this time as he would wish her to be, always solving his difficulties and indulging his whims.

Play and Work　.

We embarked on the topic of play assuming that we knew what we meant by the term, and postponing our attempt

to define it. The various theories which we have examined ought to have helped us to get clear before our minds the true nature of play, even if we still find it difficult to arrive at a definition that does full justice to so comprehensive an activity. First of all, let us ask the question, "What is the difference between play and work?" One member of a Brains Trust might reply that work is something we have to do, whereas play is something we do only if we wish; another, that work is only a means to an end, while play is an end in itself. Yet we get into difficulties if we try to get such clear-cut distinctions between play and work. Consider the case of a man who pursues his daily work with enthusiasm. Is he doing it because he must? Is he not doing it for its own sake? And consider the case of a studious schoolboy who is dragged unwillingly from his books to 'play' compulsory football. Is his 'play' something that he does because he wishes? Is it something for its own sake? The truth is that we cannot find the distinction between play and work in the activities themselves, for what is play to one is remarkably like work to another. Whether or not an activity can fairly be called 'play' depends entirely on the attitude of the doer. If you perform any activity joyfully and of your own accord, not because you are compelled by others or by a sense of duty, and if in the performance your motives are finding full expression and your emotions release, then that activity is play for you, whatever it may be for anyone else. If, on the other hand, you perform an activity without joy, not because you want to, but because you feel you ought; if your heart and soul are not in it, then for you it has all the qualities of work, whatever others may call it. We may say, then, that all joyful, spontaneous, creative activities which are the expression of a person's very self are play.

Higher Forms of Play

Our definition disposes at once of the notion that play is frivolity, one of the childish things that we put away when we become men. Not only do we play when we are young: we remain young so long as we can play. It is therefore no accident that we apply the word 'play' to some of man's greatest creative achievements such as *Hamlet*, or that we talk of a Beethoven symphony being 'played'; for all man's masterpieces have been created in the very spirit of play as we have defined it. Not only in drama and music, but also in painting, in craftwork, in science, in mathematics—generally in all disinterested pursuit of beauty and truth—man has displayed this spirit of joyful, spontaneous, adventurous, creative activity, which is the very essence of play. The little child is most fully himself when he plays; and it is always in the spirit and by the creative outlook of play that the grown man realizes his highest artistic and intellectual possibilities.

QUESTIONS AND EXERCISES

1. Give instances of your own activities that are in the main (*a*) conservative, (*b*) creative.

2. Select one of your creative activities and see what conservative activities you can discern in it.

3. Collect examples of routine activities in (*a*) yourself, (*b*) your friends, (*c*) little children, (*d*) old people, (*e*) characters in fiction.

4. Take a story that you know is popular with children and examine it for elements of repetition.

5. Think of some skilled action which you have practised because you wanted to. Is it an important channel of self-assertion for you?

6. Find instances of activities which at one time required much thought on your part but which are now automatic.

7. In *King Lear* or any other Shakespearian tragedy what is the emotional conflict and how is it resolved?

8. If you have thoroughly enjoyed a performance by any comedian, examine the reasons for your enjoyment.

9. Examine how far you identify yourself with the hero of a book you are reading or a play you are witnessing. To what extent do you feel his emotions?

10. Make out a table like the following. Put down examples of play (such as 'playing houses') in the left-hand column, and put a cross under "Surplus Energy," "Practice," etc., whichever you think the most suitable explanation.

EXAMPLE OF PLAY	SURPLUS ENERGY	PRACTICE	RACIAL MEMORY	EMOTIONAL RELEASE

11. How do you explain the fact that a mother is untiring when her child is dangerously ill?

12. Collect instances of 'make-believe' play and imaginary companions from the children you know and see how far you think they give an indication of the child's unexpressed and unfulfilled desires.

13. Read one of the old fairy tales and judge for yourself how far the doctrine in the text is correct.

14. Find an activity that is play for you and work for some one else. Find also one that is work for you and play for someone else. How do you account for the difference?

15. What is your own outstanding form of creative activity? Does it fulfil the description of play given at the end of the chapter?

SUGGESTIONS FOR FURTHER READING

DREVER: *Introduction to the Psychology of Education*, chapter vi.

GROOS: *The Play of Animals*; *The Play of Man*.

McDOUGALL: *An Introduction to Social Psychology*, chapter iv; *An Outline of Psychology*, chapter v.

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapters vi and vii.

ROSS: *Groundwork of Educational Psychology*, chapter vi.

Chapter VII

THINKING AND REASONING

IN our examination of the motives of human behaviour we have made frequent reference to the feeling and striving aspects of experience. Less has been said about the knowing aspect. But we noted that every experience does involve a knowing of something: in the experience we have when an inborn motive is active, for example, we notice, that is to say we know, some object in the outer world towards which we cannot by our very nature be indifferent. What we call 'thinking' is, in the broadest sense of the term, just mental activity in its knowing aspect. We do not apply the term to feeling or striving: when we use it we are definitely concerned with knowing.

Now, as we saw at a very early stage, every experience has an object.[1] A feeling experience has an object such as pain, and a striving experience has an object such as safety. A knowing experience too has an object, whether it is the multiplication table or the name of the Prime Minister. So we might say that thinking is mental activity with regard to objects that are known. And we can most profitably embark on our exploration of the thinking process by considering the objects of which we can think, that is to say, the objects of thought.

Perceptual Thinking

An object of thought comes into being when I look at a tree. Strictly speaking, the object of thought is not the tree itself, but rather a mental object which comes in some obscure way as the result of the focusing of the rays

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[1] See p. 18.

of light from the tree on the retina of my eye. I do, however, take this mental object as a sign that there is something in the external world which I am accustomed to call a tree. Such an object, which is present to the mind because a sense-organ (in this case the eye) has been stimulated, we shall call a sensation. The mind actively concerns itself with the sensation immediately it comes into being; and this activity of the mind with regard to sensations is called perceptual thinking or, simply, perception. Perceptual thinking is thus mental activity with regard to objects that result from the stimulation of a sense-organ.

When the ear is stimulated we perceive or have a perception of a sound; when the nose is stimulated we perceive a smell; when the finger-tips are stimulated we perceive a touch; and when the tongue and palate are stimulated we perceive a taste. In seeing, hearing, smelling, touching, and tasting we have the familiar five senses. People often say that they believe the evidence of their senses, meaning that they are sceptical about the reality of anything that does not affect a sense-organ. But it is important to realize that our sense-organs are affected by only a few of the many streams of energy that must constantly be playing on us, and that therefore it is foolish to suppose that they in themselves constitute an adequate means of exploring our environment. As I write, waves from broadcasting stations must be reaching me all the time, but I am quite unaware of them until I turn the knob of the wireless set. And then I am aware of them only through the sounds which they enable the wireless set to produce, that is to say through something that affects one of my sense-organs.

Besides the five senses with their well-defined bodily sense-organs—eye, ear, nose, tongue and palate, finger-tips—we have others. We have sensations of temperature

or pain given us through nerve-endings in the skin; we have 'organic' sensations such as hunger and thirst, feeling well or feeling ill, which have their origin in the digestive and other organs of the body; and we have what is called the kinæsthetic sense, which gives us information about the posture of the body and whose special organ is the labryinth, or inner ear. All of these provide us with the sensations which are the material for perceptual thinking.

Imaginative Thinking

All thinking that is not perceptual thinking is imaginative thinking. Thus imaginative thinking, or imagination, is mental activity with regard to objects that are not sensations. What, then, are the objects of imaginative thinking?

To find an answer to this question let us return to our previous example. I look at a tree and have a sensation about which my mind is active: this, as we have seen, is perceptual thinking. But, as I sit writing, I can, if I try, see a tree 'in my mind's eye.' What is before my mind now is not a sensation of sight, for there is no tree to stimulate my eye; but rather a substitute for that sensation which I can have because I have often looked at actual trees. Such substitutes for sensations we call 'images,' or, more correctly, 'memory-images' since we have them in virtue of memory. Memory-images, then, are the simplest objects of imaginative thinking.

The example we have considered is an image of sight, or a visual image. But we can equally well have before our minds substitutes for or copies of sounds. I can hear the sound of a violin 'in my mind's ear'; and, by an extension of the usual meaning of the word 'image,' I call this substitute for an actual sound a sound-image, or an auditory image. We can have images corresponding

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to every type of sensation. When we smell a rose in imagination we have a smell-image or an olfactory image; when we eat a grilled steak in imagination we have a taste-image or a gustatory image; and when we touch a piece of velvet in imagination we have a touch-image or a tactual image. In a similar way we can have temperature-images and pain-images, 'organic' images of hunger and bodily discomfort, and kinæsthetic images, imagining what it feels like, for example, to bend over and touch our toes. In all these cases the object of thought is a substitute for or a copy of an actual sensation. Since seeing and hearing are our most important powers of sense it is not surprising to find that with most people images of sights and sounds are much more vivid than those corresponding to other senses. Again, some people prefer to do their thinking in terms of sight-images, others in terms of sound-images. A person who was blind, deaf, and dumb would be able to think only in terms of touch-images and, possibly, smell-images, taste-images, and kinæsthetic images.

Although images are substitutes for actual sensations, we are seldom in any danger of confusing them with their corresponding sensations. We know quite well, as a rule, whether the tree we see has real existence outside ourselves or whether it is only an image. How do we distinguish between the two? Perhaps we know the difference because the image is nearly always less vivid, less steady, than the sensation; but possibly it also has some subtle quality of its own which ensures that we do experience it as an image and not as a sensation.

General Ideas

So far the objects of thought which we have considered have been particular objects. If I look at the domestic

cat my object of thought is a sensation of one particular cat; if, looking the other way or closing my eyes, I see it again 'in my mind's eye,' my object of thought is an image again of one particular cat. How can I think, not of this or that particular cat, but of cats in general? To a small extent our minds have the power of entertaining generalized images, or pictures that are not particular pictures, but these usually have a fleeting existence: if the mind dwells on them for any length of time they begin to assume a particular shape, a particular size, a particular colour, and so on, thus ceasing to be general. It would be extremely difficult, for example, to have an image of 'cat' that would include the domestic cat, whether black, grey, or tortoiseshell, the lion, the tiger, the leopard, the panther, and the puma. Yet we do have the power to think of cats in general, or the cat family, without thinking of a particular cat or even a particular kind of cat. We can also think of abstract notions such as justice, or of values such as truth, beauty, or goodness—things that we cannot possibly see in pictures. What is it that enables us to entertain general ideas as objects of thought? We shall try to shed some light on this difficult question by considering (a) the formation of concepts in our minds, and (b) the function and the use of language.

Concepts

. We have just reminded ourselves that it is our innate motives that impel us to notice certain particular objects in our environment: thus, for example, it is my safety motive that makes me pay attention to the sound of a flying-bomb and to adopt the appropriate mode of behaviour. Similarly, if I can entertain a general idea such as that of the cat family, there must be that in my mind which is capable of apprehending that general idea:

there must be a pattern of a very general sort which I am ready to apply to the general idea as an object of thought. These general patterns in our minds are called concepts. Perhaps a simple example will make clearer the nature of these patterns and the way in which we apply them to interpret our environment. Look at the diagram and ask
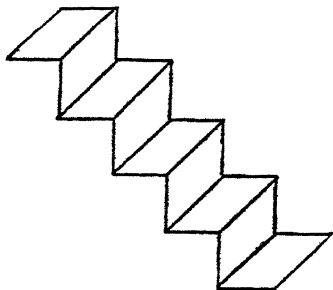
yourself what it is. A person whose mind is stored with geometrical concepts will say that it is a set of equal parallelograms having sides in common with their neighbours, and so on. Another will say that it is a stair looked at from above. "No," another will say, "it is a stair looked at from below." Yet another might say that it is part of a concertina. But what *is* it? Clearly all depends on the concept or pattern we apply to interpret it.

A primrose is growing by the wayside. A botanist sees it as a flower belonging to a particular species of a particular genus of plant. The poet Wordsworth tells us of one matter-of-fact Peter Bell to whom it was a yellow primrose and nothing more. But to Wordsworth himself, the philosopher-poet, it was the key to the ultimate meaning of life.

> To me the meanest flower that blows can give
> Thoughts that do often lie too deep for tears.

His mind was stored not with botanical or matter-of-fact concepts, but with philosophical concepts. What we see, what we think, is determined by our concepts.

The Formation of Concepts

How do we get our concepts? Are there any with which we are born? It is impossible to answer the latter question with certainty, but it seems probable that we have in our inheritance certain patterns of a very general nature in terms of which we interpret our experience from the start. Perhaps 'space' and 'time' are two such inherited concepts which by our very nature we are prone to apply to the interpretation of our experience. But there is no doubt that we have most of our concepts as a result of our own individual experience. How do they come into being in our minds? How, for example, do we form our concept of the cat family? It is usually said that we analyse or break up in thought all the separate cats we encounter into their several characteristics: then, rejecting all the characteristics that not all the cats possess, we lump together or synthesize the characteristics they have in common. The result of this analysis and synthesis is our concept of the cat family. But this account is not entirely satisfactory. Clearly if it were the whole truth our concept of the cat family would be an extremely barren pattern, excluding the tiger's stripes, the lion's mane and the leopard's spots, for not all cats have these. But the word 'concept' literally means 'held together': thus a concept is something that is rich and full rather than a barren pattern. It binds together rather than separates particulars; it is inclusive rather than exclusive. No doubt the features that all cats have in common are prominent in our concept of the cat family; but the concept includes rather than excludes

the possibility of the stripes of the tiger, the spots of the leopard, and the mane of the lion. Similarly our concept of a clock includes the possibility of a pendulum and the possibility of a spring. These possibilities are held together in the concept 'clock.'

Language

We have now some notion of how we form concepts which enable us to grasp general ideas such as that of the cat family—an idea which embraces a whole host of particular exemplifications which we can see or imagine. But how do we get a concept of a quality such as justice, which we cannot picture in particular exemplifications? There is only one answer to this question: we get such a concept through language. Indeed, without language we should be unable to form any but the most rudimentary concepts.

If you are asked what language is you will probably say that it is a means of communicating our thoughts to one another. This it certainly is: but it is perhaps even more important to realize that language is our very means of thinking. If our thinking were confined to sensations and mental pictures it would remain at a low level: any attempt at a complicated thought-process would quickly break down by its own weight. But just as it is much more convenient to exchange money than to barter the goods the money represents, so it is much more convenient and economical of effort to deal with words which represent things than to deal with the things themselves. Words, then, are symbols or substitutes for things and actions, and our command of language is a measure of our power of thought. A famous professor of psychology [1] said that our use of words as substitutes for

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[1] C. Spearman.

ideas makes those ideas "like molten bullion poured into coining moulds whence they issue as legal tender."

Why should.a particular word be the symbol for a particular thing or a particular action? Certain words such as 'cuckoo,' 'clang' and 'splash' are obviously appropriate symbols for the things and actions they represent. Others, such as 'quiver' and 'quagmire' with their shaky sounds, and 'flounder' and 'flop' with their clumsy sounds, are again clearly good symbols for the ideas they label. 'Strong', 'strangle,' 'strenuous,' 'stretch' and similar words which require a considerable effort to pronounce are again peculiarly fitting. It is not, of course, always so obvious why certain words have certain meanings. But one thing is certain: a thing and its name become very firmly and intimately fused together in our minds. Our own surnames are so intimate a part of ourselves that we do not care to have strangers taking liberties with them lest they take similar liberties with us. Our Christian names are even more intimate substitutes for ourselves, and we feel that they should not be used at all except by those whom we accept as friends. Certain words are 'swear words' because they denote either something we ought to reverence or something too disgusting to be mentioned; such words therefore should no more be dealt with lightly than the ideas they represent.

Language is the tool or instrument of thought. We can see this very clearly when we reflect that we could not do .any but the simplest of arithmetical calculations without our wonderful number-language consisting of nine symbols and a zero: the Romans, with their much more clumsy system of V's, X's and L's, could not for that very reason become proficient in arithmetic. We see the same when we advance from arithmetic to algebra. There we find ordinary words incapable of taking us far, so we invent a special language for our purpose. The

fact that every department of thought requires its appropriate language must be our excuse for introducing a number of psychological terms into these pages, although the writer has tried to stick to ordinary language as far as possible.

But the convenient tool of thought may all too easily become a snare, for words are apt to tyrannize over our thinking. The glib use of words does not necessarily mean that we understand the ideas to which they refer. It is a very useful exercise to have to explain the meaning and use of words to others. If we are unable eventually to turn our cash into goods and services our money system is spurious; and, in exactly the same way, if we cannot 'deliver the goods' in the ideas that our words represent, then our use of language is fraudulent. It is particularly important to remember this simple truth in these days of slogans and catchwords.

The Thinking Process

Up to this point we have been dealing mainly with the objects of thought—sensations, images, general ideas— and with the means we employ for entertaining such objects. We now ask ourselves what we actually do when we think. A comprehensive and simple answer to this question can be given in terms of two far-reaching principles, namely the finding of relations and the finding of correlates. Let us investigate the meaning of these principles.

Relation-finding

Suppose I say to you "black and white." What does your mind at once do? It immediately says "opposite," or "whisky," or "chessboard," or something else that

connects or relates the two given ideas. The two ideas
cannot stand in isolation from one another, for your
mind is made so that it *must* find a connexion or relation
of some kind between two objects of thought that are
presented to it at the same time or in quick succession.
This is a basic law of our thinking: there can be no
thought without relation-finding. The reader should try
it for himself with pairs of ideas such as (*a*) quarrel,
disagree; (*b*) milk, water; (*c*) five, ten; (*d*) yard, inch;
and so on.

The relation-finding principle can be pictured as in
the diagram.
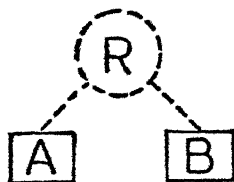
A and B are the given objects of thought and R is the
relation found by the mind. The fact that the relation
is not presented to the mind, but found by it, is symbolized
by the dotted lines.

Correlate-finding

Now, suppose I say to you "black, opposite." Your
mind now says "white," which is the opposite of black.
This time I have given you an idea—namely, "black," and
a relation—namely, "opposite"; and your mind finds
the correlate, that is to say the idea which bears the given
relation to the given idea. Again the given idea and
relation cannot stand apart: your mind is made so that
it must produce the missing item or correlate. Like
relation-finding, correlate-finding is at the root of all

our thinking. Again the reader by trying the following should convince himself that, given an idea and a relation, his mind does produce correlates: (a) ₊hot, opposite: (b) yard, smaller; (c) four, thrice; (d) sun, satellite.

The principle of correlate-finding can be pictured in the same way as the previous principle. In the diagram
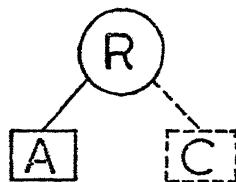
A is the given idea, R the given relation, and the finding by the mind of the correlate C is again symbolized by the dotted lines.

Joint Working of the Laws

In all but the very simplest of our thinking both principles are at work. Both are involved in a simple proportion sum, such as

2 is to 8 as 5 is to (?).

The mind immediately supplies 20 for the missing number. What has happened? We take the item '2 is to 8' and find the relation '4 times': then we go to the '5' with the relation '4 times' and get the number 20, which bears this relation to 5. Of course the skilled arithmetician produces the answer so quickly that he is unaware of the steps by which he has reached it. Yet the steps have been taken, however quickly: the mind has found first a relation, then a correlate. In a similar way we have both laws working in what is called 'analogy': "Sailor is to navy as soldier is to ?" Again the mind says

"army," and the process of thought is exactly the same as in the proportion sum.

Different Kinds of Imagination

In our imaginative thinking the unceasing finding of relations and correlates results in the building up of knowledge, whether of a theoretical or a practical sort, and in the creation of works of art. Remembering that the term 'imagination' includes all thinking that is not perceptual, we can, if we reflect a little, see how the mind produces such results. One sort of imagination differs from another. Imagination may be merely reproductive, reproducing in memory faithful copies of past experiences; or it may be constructive, combining elements derived from past experiences into new wholes. It is the constructive rather than the reproductive imagination that is called 'imagination' in ordinary speech. Constructive imagination in turn may be merely imitative, following lines laid down by another, as in the reading of a novel or the following of an argument; or it may be creative, the thinker himself creating new wholes, as in the writing of a novel or the devising of an argument. Creative imagination is practical when the thinker accepts conditions and limitations from outside himself: the imagination of the civil engineer is creative in this practical sense, directed as it is towards an action such as the building of a bridge; but the imagination of the scientist, who frames new scientific theories, is also creative in the practical sense, although it is directed towards understanding rather than towards action. Creative imagination is æsthetic when the thinker regards himself as free from the outside control of the physical world. Æsthetic creative imagination may fairly be called artistic when the thinker accepts, not control from outside, but control from within—self-

imposed conditions of consistency, congruity, and unity. This is the imagination of a Shakespeare, a Beethoven, a Turner. But when no control is accepted either from outside or from inside the imagination runs riot, as in dreams, and we have mere fantasy.

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                     Imagination
                         |
        _____
       |                                        |
  Reproductive                             Constructive
  (Memory)                                      |
                          _____
                         |                                   |
                     Imitative                            Creative
                                                             |
                                        _____
                                       |                                        |
                                   Practical                               Æsthetic
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                               |              |                        |              |
                             Action     Understanding              Artistic      Fantastic
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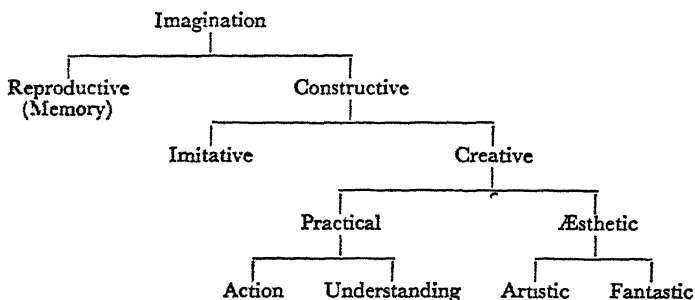
The table summarizes these conclusions; but it must not be supposed that there is any hard-and-fast line between the various sorts of imagination. The distinctions are merely broad ones.

Reasoning

One form of the practical creative imagination that calls for further examination is reasoning. Let us consider an example of reasoning and see what is involved in it. We shall select the old problem of the boatman who had to take a wolf, a goat, and a cabbage across a stream, and who, for some obscure reason, was allowed to take only one at a time. Now imagine a very stupid boatman who could not think out in advance how to proceed. He might start by taking the wolf across the stream and find on his return that the goat was busy devouring the cabbage. Having got another cabbage and brought the wolf back, he might start again, this time taking the

cabbage across, only to find when he returned that the wolf had started on the goat. The only thing to do now would be to recover the cabbage, get another goat, and have a third attempt. This time he would, of course, take the goat across, and find that all was well on the other side when he returned. He might then transfer the wolf and leave it with the goat, going back for the cabbage; but when he got it across the wolf would again be destroying the goat. Eventually, by much trial and error and waste of goats and cabbages, he might by chance hit on the right solution—to take the goat first, then come back for the cabbage, take it across, and bring back the goat, leaving it and taking the wolf, finally coming back for the goat.

The intelligent reader is, of course, capable of solving the problem in imagination, that is to say by reasoning. In imagination he may make some of the errors that the boatman made, but he finds, without casualties among goats and cabbages, that they are the wrong methods. He does his trial and error in imagination. Reasoning is just the solution of a problem in imagination. To reason is to perform an imaginative experiment.

In our example we, when we reason, experiment not with actual wolves, goats, and cabbages, but with mental pictures of them. In a similar way chess and bridge problems involve imaginary playing of the game. In higher flights of imagination we experiment not with mental pictures, but with words, or with symbols, as in the case of mathematics. Correct reasoning consists in the finding of the relations and correlates that give the solution of a problem. The progress of science, which is a supreme achievement of human reason, has consisted in the relation of fact to fact, of fact to generalization, and of one generalization to another; and in the discovery of new facts by correlate-finding. The ultimate goal of

science is the discovery of all facts and their relations one to another.

Learning by Doing

If imaginative experimentation is the true nature of a reasoning process it would seem to follow at once that the best way to become a good reasoner in any branch of thought is to have wide experience of the things with which that branch of thought deals. Children's arithmetic is on very insecure foundations if the learners have never actually experimented with the things the numbers represent; university students who learn their science from books rather than from experiments in the laboratory and in the wider world have, at best, a barren understanding; and armchair strategists who have never been in a battle can rarely contribute anything of value to military problems. Practical experience of men and things is the best possible basis for a sound structure of reasoning in any sphere of thought.

QUESTIONS AND EXERCISES

1. Mention knowing-experiences which have as their object (a) a sensation, (b) an image, (c) an idea.

2. Shut this book and have a good look at it. Then close your eyes and picture it in imagination. Compare the two experiences.

3. Look at any object and name it. What is involved in your being able to name the object?

4. Give examples of the various sorts of images mentioned in the text.

5. Compare with one another in respect of vividness the following memory-images: (a) a friend's face, (b) the sound of an air-raid siren, (c) the 'feel' of velvet, (d) the smell of a rose, (e) the taste of an apple. Which is the most vivid? Which the least?

6. Can you decide whether in your thinking you prefer visual or auditory imagery?

7. "What you see depends upon what you are." Give an example which brings out the truth of this statement.

8. Describe how a concept of "flying machine" might be formed, using your own experience as far as possible.

9. "Words are wise men's counters, but they are the money of fools." Explain and exemplify this dictum.

10. Give your own examples of relation-finding and correlate-finding.

11. Describe your thought-process in completing the following:

> (a) *Circle* is to *Square* as *Sphere* is to ?
> (b) "At" is to "That" as "Is" is to ?
> (c) *Sorrow* is to *Misfortune* as *Joy* is to ?

12. Give the next term of each of the following series and describe your thought-process:

> (a) 1 3   5   7
> (b) 3 6 12 24
> (c) 2 5 10 17

13. Find an example of each of the types of imagination shown in the table at p. 108.

14. Solve the following problems and describe how you found your solution:

(a) The person who stole Brown's purse was neither dark, nor tall, nor clean-shaven. The only persons in the room at the time were: (1) Jones, who is short, dark and clean-shaven, (2) Smith, who is fair, short and bearded, and (3) Grant, who is dark, tall, but not clean-shaven. Who stole Brown's purse?

(b) In a school of 270 boys 100 learn neither French nor Science. If 150 learn French and 130 learn Science, how many learn both?

(c) A man has two offices, A and B. From his own home station a train goes to office A every five minutes, and one to office B every five minutes. It is all the same to him which office he goes to in the morning: he goes to the station at any time and takes the first train that comes in. He finds that four out of five of his visits are to office A. Why is that?

SUGGESTIONS FOR FURTHER READING

COLLINS and DREVER: *Experimental Psychology.*

DREVER: *Introduction to the Psychology of Education,* chapter x.

JAMES: *Text Book of Psychology.*

McDOUGALL: *An Outline of Psychology,* chapter xv.

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapter xv.

ROSS: *Groundwork of Educational Psychology,* chapter xii.

SPEARMAN: *The Nature of Intelligence and the Principles of Cognition* (for advanced study).

Chapter VIII

HUMAN ABILITIES

THE main prop of our argument throughout has been the contention that man is endowed with certain motives or drives which impel him towards certain goals. In the present chapter we shall see that he is given not merely these drives but also the means of reaching the goals of the drives. He is endowed with at least two broad classes of abilities—namely, (*a*) abilities to perceive certain things in his environment, or perceptual abilities, and (*b*) abilities to perform certain actions, or motor abilities. To these we ought, perhaps, to add (*c*) imaginative abilities. All man's abilities are there in the service of his motives, and it is fundamentally important to realize that they are not themselves the motives of behaviour.

The lower animals too are endowed with motives to reach certain goals and with the appropriate abilities. But there is, nevertheless, a vast difference between the lower animals and man. In the case of the former each motive is closely and exclusively linked with or geared to special perceptual and motor abilities. The result is those fixed and stereotyped modes of behaviour which, by common consent, are spoken of as 'instinctive': we say that an ant, for example, is a creature of instinct. But in man there is little trace of any such close and exclusive linking of motive to ability, and it is difficult to find any one ability or set of abilities that is the sole property of any one motive. While a peacock can achieve self-display only by strutting with outspread tail, man can reach the goal of self-display in a multitude of different ways. He is free to use any or all of his abilities in his following out of any one motive; he can adapt

means to ends. That is what we mean when we say that man is by nature an intelligent being. His behaviour is not instinctive in the same sense as that of the lower animals.

It is our purpose now to explore a little the nature of man's intelligence and abilities. A vast amount of work has been done on this topic, and, while much remains uncertain, there are several broad conclusions that are generally accepted. We shall not at once attempt to define 'intelligence': we shall rather begin by discussing it in general terms in the hope that before we finish our knowledge will be more exact.

Knowledge and Intelligence

A famous professor of our own time has said: "You cannot be wise without some basis of knowledge; but you may easily acquire knowledge and remain bare of wisdom." Here we have implied the familiar distinction between the knowledge of facts, on the one hand, and the power to use knowledge, on the other. In many a story the smart, clever person who can make a little knowledge go a long way is contrasted with learned doctors who are so weighed down with their own pedantry that they are ineffective in the ordinary situations of life; and a certain king who hailed from the North was dubbed "the wisest fool in Christendom," because he had acquired learning which he was too much of a fool to be able to use.

What the ordinary man means by 'intelligence' is just the power to use knowledge, to see that certain facts are relevant to certain situations. We have this common notion of intelligence described in words and phrases such as 'mother-wit,' 'savoir faire,' 'common sense,' and 'gumption'; and we have it expressed more exactly by Dr P. B. Ballard as "the mind's general efficiency in

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dealing with experience," by Professor C. Burt as "inborn, all-round, mental efficiency," and by the late Sir John Adams, in a characteristically neat phrase, as "applied thought." All of these notions imply the power of the mind to adapt itself to new situations and deal with fresh problems by marshalling and applying its resources.

The Measurement of Intelligence

We are all familiar with methods of measuring know-ledge, for who among us has never taken an examination of any sort? The examination has for long been the accepted instrument for measuring knowledge in any sphere: by its thorough application the amount of knowledge, or mental content, can be estimated more or less exactly. But it is intelligence, or mental capacity, that we wish to measure; and here we have a problem less easy of solution than that of measuring knowledge, or mental content. One might think at first sight that mental capacity could be measured by mental content, for, after all, the easiest way of measuring the capacity of a vessel is to measure the amount of water it contains. But there are several serious objections to such a method. The mind is not a vessel to be filled with knowledge: the relation between the mind and knowledge is not so simple as that between a vessel and the liquid it contains. Even if the mind were a vessel, we ought to remember that we can measure a vessel in this way only if we fill it to the brim with water, and clearly we can never be sure that the knowledge possessed by the mind is all that it is capable of possessing. Further, if we seek to compare one person's native wit or intelligence with that of another by measuring their respective amounts of knowledge, we must be sure that they have had not only equal oppor-tunities of acquiring knowledge but also equal incentives

to acquire it. Again, if our preliminary notions of the nature of intelligence are correct, then, when we are taking knowledge as a measure of intelligence, we must be sure that we are testing not the mere possession of facts or ideas but the power to apply facts and ideas in new cases. Altogether, knowledge complicates the problem so seriously that it is not surprising to find that the earliest workers in the field of mental measurement discarded it altogether and sought some other means of estimating the power of the mind.

Early Attempts to Measure Intelligence

Those early workers used the means with which they were familiar—namely, the instruments and methods of physical science. These they could not apply to the mind, so they had to apply them to the body in the hope that they would find some bodily measurement that would also be the measure of intelligence. There was nothing absurd in such attempts: in physical science we generally use an indirect means of measurement, as, for example, when we measure the weight of the atmosphere by measuring the length of a column of mercury. The pioneers of mental measurement thought first of all of trying the head, for the head is the home of the brain which, in turn, is the bodily organ of mind: and thus the so-called science of phrenology came into being. The theory was not so much that a big head meant a big mind—northerners will recall the common saying, "Big head, little wit"—as that a study of the relative proportions of the skull, and its 'bumps,' would provide the measure of intelligence. But phrenology, though by no means dead to-day, is discredited among scientists. Another early attempt was physiognomy, or the study of the face. Of this we may say that, while a skilled study of facial

expressions may provide some index of character and disposition, it provides none of intelligence. Then came the stage of the psychological laboratories with their imposing array of brass instruments. The powers of the sense-organs—seeing, hearing, touching, and so on—were measured carefully in the hope that a simple measure of intelligence through sensory tests would come to light; but no reliable measure was found along these lines. Gradually it became clear that the measurement of the mind's power, apart from its knowledge, could be made only by getting the mind to apply itself directly to tasks which do involve intelligence, which, in other words, require the finding of correct relations and correlates, or the application of thought. When this was finally realized progress was sure and rapid.

The Testing of Tests

The thoughtful reader has no doubt been asking himself how we can know when we have found a reliable measure of intelligence. This question can be answered quite simply in general terms. Suppose I devise a test which I think ought to be a good test of the intelligence of fourteen-year-old boys. I can test my test by approaching a friend who is a teacher of a class of fourteen-year-old boys, by asking him to award marks to his boys, whom he knows well, for their intelligence, and by getting the boys to take my test. If the results of my test agree on the whole with the teacher's estimates, I shall think that it is a good one, and I shall feel confident in applying it to a group of unknown boys of fourteen. If, on the other hand, there is no obvious connexion between my results and the teacher's estimates, I shall believe that the teacher knows better than I do, discard the test, and devise another. Here we have the fundamental principle

of testing tests: every test must first be tested on people whose intelligence relative to one another is known. A good test is one in which people whose intelligence is known to be high achieve high scores, in which people of average intelligence have average scores, and in which people of low intelligence have low scores. Obviously a test is of no value if mental defectives score high and Fellows of the Royal Society score low. Mathematical methods for making the testing of tests an exact science have been elaborated, but they are highly technical in character and cannot for that reason be profitably discussed here.

Binet and the Metric Scale of Intelligence

To Alfred Binet, a French psychologist, belongs the honour of having first devised a workable set of intelligence tests. His immediate problem was to determine what degree of backwardness among Paris children justified removal to a special school. Seeing intelligence as a threefold power of "purposive direction, active adaptation, and conscious correction" he devised questions and small problems which would test such powers, and which needed no knowledge beyond that which a city child could fairly be expected to pick up in the normal course of living. He collected a large number of questions of a variable but always simple type, and found, when he applied them to large numbers of children, that there was a minimum age at which most children could provide a correct answer to each. Thus a particular question could be answered by most children of eight and upwards, but by very few of seven: it was therefore rightly regarded as a suitable test for eight-year-olds. In this way Binet was able to classify his tests as 'belonging' to the various ages of childhood, and to construct sets of questions for the

various years of school life. His 1911 scale consisted of fifty-four questions and tasks, five for each year from the third, the eleventh, thirteenth and fourteenth years being omitted on account of the difficulty of finding tests that clearly 'belonged' to them. This was the famous Metric Scale of Intelligence, the forerunner of many others. In London Dr Cyril Burt translated the tests, rearranging and modifying them to suit London children; and in America Professor Lewis M. Terman took Binet's tests as a basis for his 'Stanford Revision,' with its tests for average and superior adults as well as children of various ages.

Mental Age and Intelligence Quotient

Binet introduced the important conception of 'mental age'—that is to say, the age whose tests a child can perform. Thus a child who passes the tests for age eight but fails in those for age nine has a mental age of eight whatever his actual age may be. If his actual age is six, he is a very bright child : if, on the other hand, his actual age is ten, he is a very dull child. In the former case we say that he is advanced by two years, in the latter that he is retarded by two years.

Binet considered that a retardation of two years below the age of nine justified removal to a special school, but that above the age of nine a retardation of three years was needed. Thus he drew attention to the fact that a retardation of two years at the age of six is more serious than a retardation of two years at the age of twelve. The reason for this is obvious. The child of six who is retarded by two years has a mental age which is two-thirds of his real age; while the child of twelve who is retarded by two years has a mental age which is five-sixths of his actual age. Since five-sixths is a con-

siderably greater fraction than two-thirds, clearly the retardation in the twelve-year-old is less serious than that in the six-year-old.

What really matters, then, is the fraction the mental age is of the actual age—that is, the 'Intelligence Quotient,' or I.Q.[1]

$$I.Q. = \frac{\text{Mental Age}}{\text{Actual Age}}$$

It is usual to express this fraction or quotient as a percentage: thus the formula becomes:

$$I.Q. = \frac{\text{Mental Age}}{\text{Actual Age}} \times 100$$

If the mental age is equal to the actual age the I.Q. is 100; if the mental age is less than the actual age the I.Q. is less than 100; and if the mental age is greater than the actual age the I.Q. is greater than 100.

Clearly the Intelligence Quotient is a better indication of a child's intelligence than the mere difference between mental age and actual age. Usually an Intelligence Quotient of 70 is regarded as an index of deficiency. The table [2] on page 120 shows the percentages of the normal population that come within various ranges of value of the I.Q.; and the labels "very superior," "superior," and so on, are attached to these ranges. The obvious objection to the use of these words, or any others, to label the various ranges of I.Q. is that words have different meanings to different people. Some one will consider that "bright" should rank higher than "superior" in the scale; and another may use "average" to denote something lower than the mathematical average which the scale intends. But probably no labels could be found which would be

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[1] The use of the I.Q. was popularized by Professor Lewis M. Terman.
[2] *The British Journal of Educational Psychology*, Vol. XIV, Part II, June 1944, p. 108.

universally acceptable: those here are merely suggestions, and the reader should ignore them if he does not like them.

INTELLIGENCE QUOTIENT	MEANING	PERCENTAGE OF POPULATION
143 and above	Very superior intelligence	$\frac{1}{2}$
131–142	Superior intelligence	$2\frac{1}{2}$
119–130	Bright	10
107–118	Above average	21
94–106	Average	32
82–93	Below average	21
70–81	Dull	10
58–69	Borderline	$2\frac{1}{2}$
57 and below	Feeble-minded	$\frac{1}{2}$

Group-tests

Binet's Metric Scale and the revisions of Burt in England and Terman in America are sets of tests which are applied by a psychologist to one individual at a time. While this is the safe and sure method, it is impossibly slow if one wants the I.Q.'s of a large number of people. For this reason group-methods of testing intelligence were evolved. It is interesting to recall that such methods originated when America entered the war of 1914–18. Faced with the task of organizing a large army out of her mixed population, she had to contrive quick and effective methods of sorting out recruits into possible officers, non-commissioned officers, privates, and those who would be more trouble than they were worth. With flattering faith she handed this problem to her psychologists, and they did not fail her. Their method was to compile sets of tests which were printed and which could be applied to hundreds of recruits at one time, the answers to the tests being written. But since not all the recruits could

read and write, there had to be a second series of 'performance' tests which could be done without having recourse to either the read or the written word.

From the amazing success of this large-scale experiment psychologists quickly gained confidence in the group-test. Since the days of the last war it has been used effectively in selecting primary-school pupils for higher education; and during the war of 1939–45 it was extensively applied to the selection not only of officers but also of personnel for all sorts of specialized jobs. We must remember that the result of a group-test in the case of a given individual is rough and ready, not nearly so reliable as that of an individual test. The former, however, gives at least a rough estimate of intelligence and indicates cases in which an individual test may be necessary for whatever purpose is in hand. As a means of comparing one group with another a properly standardized group-test is entirely reliable.

Some Broad Results of Mental Testing

At this point we may take stock of the position by indicating certain broad results of the vast amount of work that has been done on intelligence. The first of these is that the tests do measure something which, whether or not it is identical with what the ordinary man calls 'intelligence,' is an intellective quantity which enters into all our thinking activities. Secondly, the amount of this quantity varies enormously from one individual to another, and the differences in intellectual capacity are too great to be ignored. Thirdly, the amount of it cannot be increased or diminished: it is something with which one is born and which one is powerless to alter. Schooling cannot affect it: it can do no more than make the best of the capacity that is there

by nature. Perhaps the writer of the Book of Proverbs was too pessimistic when he declared that "the instruction of fools is folly," for we do try to make a fool less foolish, and sometimes we succeed: but he was right if he meant that we can never by any educational process make an intellectual giant out of a person who is poorly endowed intellectually. All experimental work goes to show that the intelligence quotient alters little throughout the years of growth: if it is low at the age of seven it will not be high at the age of fourteen. Indeed, it alters little throughout life, although, as we shall see in a moment, the formula

$$I.Q. = \frac{Mental\ Age}{Actual\ Age} \times 100$$

cannot be applied to adults.

The fourth and somewhat startling result is that 'intelligence' as measured by mental age normally ceases to grow about the age of fourteen to sixteen. It increases rapidly in the early years of life, more slowly towards the age of fourteen, then quickly comes to a halt. There is evidence that the 'intelligence' of supernormals continues to grow to a later age than in the case of normals, while that of subnormals ceases to grow at an earlier age. The intelligence of normal people ceases to increase about the age of fifteen or sixteen. So most of us now are no more 'intelligent' than we were about the age of sixteen. The reader should note carefully what has been said. It is not asserted that additional years after the sixteenth count for nothing in additional skill or wisdom, but only that the power which the tests measure in terms of mental age matures during adolescence. The intelligence quotient, as we have seen, does not grow at all, but remains more or less constant.

If, however, mental age ceases to grow, it is clear that the I.Q. as calculated from the above formula would

steadily diminish after the age of fifteen or so, and this would be a paradoxical result. After this age the formula is no longer applicable, and the I.Q.'s of adults must be determined otherwise by statistical methods.

The fifth result has to do with sex differences in intelligence. Women on the whole are just as 'intelligent' as men: the averages of male and female intelligence quotients are the same. But women cluster more closely round the average than men. Men have a greater range or spread of intelligence quotients: there are more men than women of really high ability, but this is compensated for by the fact that there are more of low ability.

The Nature of Intelligence

What is this 'intelligence' that the tests test? For a considerable time intelligence testing went on merrily enough before such an awkward question was asked. Most people assumed the truth of what Professor Spearman has called the 'monarchic' view of intelligence—namely, that intelligence, like an absolute monarchy, is "the sovereign rule of one great power," some all-pervading power that is brought to bear on all our intellectual operations, absolutely determining their quantity and their quality. If this were true we could infer that a person who shows high ability in any one direction is capable of showing it in any other: Milton, the great epic poet, and Newton, the great mathematician, might have changed places in the seventeenth century. This monarchic view of intelligence seems to underlie the practice of selecting candidates for the Higher Civil Service on the basis of their performance in hard subjects such as classics, mathematics, or philosophy.

But the voice of the sceptic began to be heard, and the psychologists had to mobilize themselves to thrash the

matter out, come to an agreed view, and present a united
front to the lay public. Unfortunately at the con-
ferences of experts it became only too clear that there was
no agreement. Some of the experts, certainly, did agree
with the monarchic view which we have described;
but others asked the 'monarchists' why, if intelligence was
only one sovereign power, they used not one test but a
whole battery of tests to estimate it. Some who differed
from the monarchic view said that intelligence was more
like an oligarchy than a monarchy, an oligarchy being
a state governed not by one but by a few rulers. Mental
ability, they said, consists of a few major powers, unrelated
to one another, and each requiring separate measurement;
and the only meaning that can be given to 'intelligence'
is a sort of 'mental profile,' exhibiting the individual's
stature in respect of each of the great mental powers.
Others were neither monarchists nor oligarchists, but
anarchists. There was no rule at all in the world of
mental abilities, they said: their name was legion, they
were all unrelated to one another, and in theory they
should all be measured separately and the sum-total or
average found. Since this was impossible in practice it
was contended that a sample of the abilities must be taken
and each ability in the sample tested—although it was
never made clear how it could be known that the sample
was a fair one.

The Two-factor Theory

Professor Spearman, of University College, London,
reduced this chaos to order by extensive research in his
famous laboratory and by abstruse mathematical treat-
ment of the results. His methods do not concern us here,
but his results are of vast importance. It is refreshing
that they agree with the results of common observation.

In his 'two-factor theory' he made the best of all worlds and put the monarchic, oligarchic, and anarchic theories each in its proper place. According to him our abilities consist of one massive, all-pervading ability, which he calls 'g,' along with a whole host of special abilities, each of which he calls an 's.' My ability to perform any task depends partly on the amount of 'g' I possess and partly on the amount of 's,' relevant to that task, that I can muster. Now in some tasks one must have both 'g' and the relevant 's' in considerable amount to produce a good result, but this is not always the case. For certain tasks 'g' may be much more important than any 's': for others 's' may outweigh 'g' in importance. In mathematics, classics, and philosophy 'g' is much more important than 's'; while in mechanical skills, singing, and drawing the 's' in each case counts much more than 'g.' And it has been found that the power of prolonged memory for meaningless material is quite independent of 'g.'

Any mental test measures the individual's 'g' along with one or more of his 's' powers. It is possible to devise tests that measure 'g' predominantly, and, by mathematical methods, to get rid of the part of the result due to 's.' Thus an individual's 'g' may be found.

We see, then, that the fact of 'g' represents the amount of truth in the monarchic view of intelligence, for 'g' does bear rule, although it is more like a limited than an absolute monarchy: while the fact of the independent 's' powers shows how far the anarchic theory is correct. What of the oligarchic theory? There is considerable evidence that not all the 's' powers are really independent of one another: they tend to cluster into 'group-factors' which enter into many but not into all of our performances.

What is 'g'?

The reader is, perhaps, curious to know what 'g' is. Here the psychologist is in a position similar to that of the modern physicist who admits freely that he does not know the nature of the reality for which his symbols stand. 'g' is a mathematical quantity which Spearman always refused to identify as the measure of what the man in the street calls 'intelligence'; but it is certainly the measure of some power which enters into all our intellectual operations. When pressed Spearman said that he conceived of it as the individual's amount of mental energy, as a force he can apply to any intellectual effort.

The Special Aptitudes

It must be freely admitted that the testing of the special aptitudes, or 's' powers, is not in so satisfactory a state as the testing of 'g.' It is not always possible to distinguish between a power that is innate and one that has been acquired in early life. Mathematical aptitude, for example, which we have seen is largely dependent on 'g,' may have developed through the fostering of interest in the subject by an inspiring teacher: the 'g' might have flowed in another direction, but it did not. Again, we cannot always be certain whether special aptitudes are single elements in our mental make-up or groups of such elements. But the following special aptitudes or groups of aptitudes, additional to 'g,' seem to be fairly well established [1]: (1) logical ability—the ability to reason, to weigh evidence, to generalize; (2) mechanical aptitude, or constructive mechanical ability; (3) arithmetical ability consisting of ability in computation, problems,

[1] Cattell: *A Guide to Mental Testing*, p. 46.

rules, and mental arithmetic, all of which are related to one another; (4) geometrical aptitude, or the comprehension of space-relations; (5) psychological aptitude, or knowing what to do in social situations; (6) musical ability, including discrimination of the pitch and intensity of musical notes, sense of time, appreciation of consonance, memory for melodies, and sense of rhythm; (7) verbal ability—facility in the use of and understanding of words; and (8) practical ability, or dexterity in handling things. It will be realized that these abilities of the psychologist do not tally conveniently with the ordinary school subjects: mathematics, for example, although it is primarily concerned with 'g,' will utilize not one, but several of the special abilities. It should further be realized that the special aptitudes, with the exception of verbal ability, do not normally show themselves at an early age: arithmetical ability begins to appear about the age of twelve, but practical or manual ability does not show itself till later. A child's intellectual performance in school up to the age of eleven depends almost solely on his 'g,' along with his verbal ability: thus any selection of eleven-year-olds for varying forms of higher education on grounds other than differences in 'g' and in verbal ability is of doubtful validity. It should be noted also that verbal intelligence tests are bound by their very nature to test verbal ability as well as 'g'; and that a child with pronounced verbal ability is likely to have an unfair advantage over one of equal intelligence but of poor verbal ability.

Conclusion

To what extent, then, have we solved the problem of the diagnosis of human abilities? Certainly much has been accomplished; but with increasing knowledge the

problem has appeared much more complex than was at first supposed. Human potentiality covers a much wider field than that of the intellectual and practical abilities which we have been discussing; and, even if methods of diagnosing such abilities were in a much more advanced state than they actually are, there would remain much that we should wish to know about a person before we ventured confidently to predict his success or lack of success in any sphere of life. Qualities of character, personality, and temperament are of vast importance; and, while courageous and promising attempts have been and are being made to test these elusive qualities, such work is merely in its infancy. Most difficult of all is the assessing of a person's sense of value in the realms of truth, beauty, and goodness: yet it is this sense of value that makes him specifically human and gives him his finest qualities. Again, investigations not confined to abilities of the intellectual and practical sort have revealed the existence of a quantity called 'w,' or will-power, or persistence of motives, along with a quantity called 'c,' or cleverness, sparkle, or originality: and the 'w' and 'c' must always be added to 'g.' It is clear that a high value of 'w' with moderate 'g' is likely to produce more valuable results than high 'g' with no 'w': the person with high 'w' is the one who is likely to make the most of his natural endowment of 'g' and special abilities. 'g,' then, though a factor of the utmost importance, is not the only thing that counts. While recognizing that the fact of 'g' says to each one of us, "Thus far shalt thou go, and no further," in intellectual attainment, we may remember for our comfort that most of us are so healthily lazy that we are in no danger of reaching our limit. Although high intellectual attainment is possible only to the few, the fact of the special abilities, along with qualities of character, personality, will-power, and sense of value, can easily

ensure that all of us can, if we will, live lives* of full personal development and social usefulness.

QUESTIONS AND EXERCISES

1. Study the behaviour of the domestic cat or dog, and judge how far it can adapt means to ends.

2. Verify the statement that man is free to use any or all of his abilities in the following out of any one motive by studying ways in which you (*a*) break down opposition, (*b*) achieve self-assertion.

3. Collect instances of people who are (*a*) learned but unintelligent, (*b*) unlearned but intelligent.

4. Why does the amount of knowledge possessed complicate the problem of measuring intelligence?

5. If you devised a test for adults how would you decide whether or not it was a good one?

6. If possible get *The Otis Self-administering Test* and try it on yourself. What result do you get for your own intelligence quotient?

7. Out of 40 people selected at random how many do you expect to find with intelligence quotients (*a*) between 94 and 106, (*b*) between 131 and 142, (*c*) between 70 and 81?

8. If you have any personal experience of being tested either for intelligence or special aptitudes consider it in the light of this chapter.

9. Comment on the "broad results of mental testing" in the light of your own experience of people.

10. Do you believe that a great scientist could have been a great poet if he had given his mind to poetry?

11. Think of the people you know, and consider how far the Two-Factor Theory seems to apply to them.

12. Can you think of people who have the special aptitudes mentioned at pp. 126, 127? Do you consider them intelligent or unintelligent?

13. Which of the special aptitudes do you yourself possess?

14. Can you think of people who have (*a*) high 'g' and low 'w,' (*b*) high 'w' and average or low 'g,' (*c*) high 'g' and high 'w'? Do you know anyone who seems to have a marked measure of 'c'? If so how would you rank his 'g' and his 'w'?

SUGGESTIONS FOR FURTHER READING

BALLARD: *Mental Tests; Group Tests of Intelligence.*
BOARD OF EDUCATION: *Psychological Tests of Educable Capacity.*

I

BURT: *Mental and Scholastic Tests.*

CATTELL: *A Guide to Mental Testing.*

COLLINS and DREVER: *Psychology and Practical Life,* chapters iv and v; *Experimental Psychology,* chapter xvi.

DUNCAN: *The Education of the Ordinary Child.*

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapters ix and x.

ROSS: *Groundwork of Educational Psychology,* chapter xiii.

SANDIFORD: *Educational Psychology,* chapter viii.

SPEARMAN: *The Abilities of Man.*

TERMAN: *The Measurement of Intelligence.*

YOAKUM and YERKES: *Mental Tests in the American Army.*

Chapter IX

GROUP BEHAVIOUR

SINCE psychology is the study of any form of behaviour and its motives, it is concerned not merely with individuals but also with groups of individuals. For a group of people exhibits a well-marked mode of behaviour of its own; its thought, feeling, and action are characteristic of the group rather than of the individuals who compose that group. The subject of this final chapter is group psychology, or the behaviour of people in groups.

What Constitutes a Social Group?

Not every collection of people is a psychological group behaving as such. Let us consider an example. At Charing Cross you will find hundreds of people any day at noon, each of whom is going about his or her own business; and such a collection of people who happen merely to be near one another in a particular spot at a particular time is not a psychological group. But let the sound of an air-raid siren followed by the rattle of a flying-bomb be heard. Then all private business will be forgotten for the time being; the attention of all will be directed to the sky, all will experience the same emotion of fear, and all will seek safety in the best possible way. The collection of people will think, feel, and act as one; that is to say, it will become a psychological group.

It should be clearly understood that the collective feeling, thinking, and acting are characteristic of the group as such, and that they are different from the normal feeling, thinking, and acting of the individuals who compose that group. As we shall see later, collective modes of feeling, thinking, and acting may be on a much

higher ốr a much lower level than the individual modes; they are certainly not a mere average or sum of the individual mental states. The individual in a crowd tends to lose his individuality and his sense of personal responsibility; he has a feeling of power which allows him to yield to impulses which he would normally keep under restraint; he feels he can do as he pleases as a member of a crowd. The fact is that when two or three individuals are gathered together new forces are at work tending to weld them into a psychological group: these forces, no doubt, reside in individual minds, but they need the presence of others to awaken them, and they have no meaning apart from their social reference. What are they?

Gregariousness, Self-assertion, and Submission

Certain of the innate motives which we enumerated earlier imply the existence of other people, and are therefore at the root of group-behaviour. The gregarious motive impels people to join themselves to one another, and, while a mere collection of people is not a group, there can be no group without a collection of people. Again, the motives of self-assertion and submission, which imply more than one person, impel a group to organize itself into leaders and led. There could be no group-behaviour if we were not endowed with these three innate motives.

Mimesis

Given these three motives as the indispensable basis, the chief factor which operates in producing the group-effect is what Sir Percy Nunn has called 'mimesis.' 'Mimesis' is the Greek word for 'imitation,' and we use it

here to include all forms of imitation—imitation of feeling and thought as well as of action. We usually confine the English word 'imitation' to imitation of another person's actions: imitation of feeling we call 'sympathy,' and imitation of thought 'suggestion.' Mimesis, then, comprises sympathy, suggestion, and imitation. Just as in individual experience we have feeling, thinking, and striving, so in collective experience we have sympathy, suggestion, and imitation. Let us look at each of these in turn.

Sympathy

'Sympathy' literally means 'feeling with others.' When a few people are in contact any pronounced feeling-state in one tends to be transferred to the others: if, for example, one is in a state of terror it is difficult for others who are with him to remain unaffected. How does this feeling-spread take place? The orthodox answer to this question is that the person who is experiencing strong feeling shows it on his face: his neighbour imitates his facial expression, and experiences the same feeling, backwards, as it were. But possibly the mechanism of the feeling-spread is more subtle than this. A pronounced feeling-state in one may induce a similar state in another directly, rather than through the medium of the senses. This is the phenomenon of telepathy. There is considerable evidence of powers of telepathy between close friends and near relatives, especially twins: it is, however, doubtful how far such a power is normally possessed. But, whatever the explanation may be, there is no doubt that we readily share one another's feelings: we do it unwittingly, not by a deliberate act of will and not realizing what is happening. Sympathy is the feeling aspect of gregariousness, and in a crowd it is

of outstanding importance. It is cumulative in its effect, being reinforced from person to person; its effect is at a maximum when an outstanding member of the group is in a pronounced feeling state. Then we may get mob-panic and mob-anger.

Suggestion

Just as we share the feelings of others, so we share their thoughts. I can, of course, share another person's ideas wittingly, as when I listen to his conversation, follow his argument, or read his book. But there is also the unwitting sharing of ideas, and it is this that we call 'suggestion.' In suggestion a person A deliberately implants an idea in the mind of a person B which B accepts with conviction, thinking that it is a bright idea of his own, not realizing that it comes from an outside source: the communication of the idea is deliberate, but the acceptance of it is unwitting. Shakespeare knew all about this characteristic of the human mind when he created Iago, who, while appearing to defend Desdemona, was deliberately and successfully suggesting evil thoughts of her to Othello; when he pictured Mark Antony inciting the crowd to violence against Brutus while maintaining that Brutus was an honourable man; and when he gave us Macbeth accepting the suggestion from the witches that he would become king. These examples seem to show that suggestion is a force powerful for evil: and our common use of the word 'suggestive' in connexion with stories and films confirms this. But although suggestion may undoubtedly be employed for evil purposes, it is equally powerful for good.

Suggestion is the trait of the human mind which leads a crowd to think as one: it is the knowing aspect of gregariousness. It should be thought of in connexion

with the motive of submission. If you have a submissive attitude towards another person you are prone to accept uncritically his opinions and beliefs; for you readily accept suggestions from those you admire and those in authority. Children and people who have never learned to think for themselves are especially suggestible, but perhaps all of us are more suggestible than we care to think. The writer used to perform the following experiment on unsuspecting students in order to convict them of suggestibility. An imposing array of wires, electric-light bulbs, switches, and so on, was rigged up; the student was mendaciously informed that the experimenter wished to test the sensitivity of his skin to small changes in temperature; he was asked to hold a coil of wire in his hand, and told that, when a certain lamp lit up, an electric current would pass through the coil and heat it. Matters were arranged so that sometimes the lamp was lit although no current was passing through the coil; yet the student frequently reported that it was getting warm when nothing was happening to warm it. He had accepted the suggestion that there was an inevitable con-nexion between the lighting of the lamp and the heating of the wire.

We should realize our tendency to accept suggestions, and develop the critical, truth-seeking habit. This is particularly important in these days, when we are all the time being bombarded by suggestions in the form of slogans and catchwords in advertisements and cheap newspapers.

Imitation

Imitation is the doing-aspect of gregariousness: it is through imitation that members of a group tend to act together. When we imitate we copy the actions of others,

wittingly or unwittingly. In unwitting imitation we always find a native motive at work. To begin with, the gregarious motive has driven a person B to join himself to another person A. A, actuated by some innate motive, performs the appropriate action: thus, for example, if his flight motive becomes active he is afraid, and runs away. B, being a person of similar mental make-up, experiences by sympathy the feeling that accompanies the working of that motive, and he too performs the appropriate action, thus imitating A: in our example B too would feel fear and run away. This is imitation in its purest form.

But imitation can also be a deliberate, witting process. B, noticing A following what he conceives to be a desirable mode of skilled behaviour, sets about the business of producing a copy of it in himself. Here he has not the appropriate action ready made: A, for example, might be executing some complicated dance step. B's first attempt at imitation will be very clumsy, since he has not acquired the bodily skills that underlie A's action. For successful imitation he must analyse or break up A's dance step into elements which he can perform successfully; then he must synthesize or combine them into the complicated movement by repeated practice. It is important to note that B can imitate A successfully only if he is capable of performing each of the separate actions; if he were paralysed in one leg, for example, he could never achieve successful imitation of the dance step. We can imitate only in terms of the powers we possess. Throughout the ages man watched the flight of birds, but, being without wings, he was incapable of imitating it. Having a marvellous brain, however, combined with manipulative ability, he at length produced the Spitfire in terms of the powers he did possess by nature.

It is often said that imitation cramps originality, but this need not be so. "The most original minds find themselves only in playing the sedulous ape to others who have gone before them along the same path of self-assertion." [1] A twentieth-century scientist must imitate the thinking of many of his predecessors before he can hope to make an original contribution of any value; and even Shakespeare had to stand on the shoulders of the Elizabethan dramatists who preceded him. We should therefore not despise good models in our efforts to be original: any powers of originality we possess will be of value only if we are willing to learn from others.

The Law of Fusion and Arrest

When several people are together they do not immediately form a compact psychological group: the higher forms of group-life take some time to appear. To begin with, only what the various individuals have in common contributes to the group-effect. Now what people always have in common is their stock of innate motives; these, therefore, tend to fuse together at the start and to reinforce each other. What is peculiar to each individual will not count in the group-effect, but will be arrested. It is only the highest common factor that counts when a group is beginning to form. This "law of fusion and arrest," as it is called, explains why it is that a crowd lacking leadership will always tend to behave on the level of crude, unsublimated innate motives; and why the conversation of a body of men who have no intellectual, artistic, or practical interests in common tends to descend to the level of 'smutty' talk. Perhaps it also explains why a committee sometimes comes to decisions that are unworthy of the intelligence of its separate members.

[1] Sir Percy Nunn.

Crowd, Club, and Community

Whether or not group behaviour sinks to the lowest level, or rises high above the average level of the behaviour of the individuals who constitute that group, depends on the kind of group that is in question. Social groups may be classified into three main types. There is, first of all, the crowd type of group. The group that comes into being to attend to a flying-bomb and to take appropriate common action is a mere crowd: its collective modes of feeling, thinking, and acting are transient; it has only a here-and-now existence; and, as soon as the circumstances which have brought it together have disappeared, it dissolves. Like a young child, a mere crowd follows the impulse of the moment, and from it we do not expect any lofty type of social behaviour.

Secondly we have the club type of group. We call it this because a club constitutes a good example. The members of a club—a golf club, for example—are held together by common interests and sentiments, or even by ideals, which are powerful enough to weld individual members into a group. A choral society, to take a further example, holds together in a group all sorts of people who share a love of good music and a desire to perform it worthily. Compared with the mere crowd the club has a relatively permanent existence.

But the club does not absorb and inspire the whole life of its members as the third type of group, the community, does. A community is a social group held together by a common purpose so comprehensive that it can include all the individual purposes and ideals of its members who, since they can all take aspects and phases of the community-purpose as their own aim in life, are provided with the fullest opportunities of personal development and self-realization. A Church ought to be such a community,

though to-day most Churches rise no higher than the club type of social group. Certainly a nation ought to be a community. A community is on a higher level than a club in that it is held together not merely by common interests and sentiments, but by gathering together and focusing the whole life of its members.

The Group Mind

Has a social group a mind over and above the individual minds of its members? Here we are asking a difficult question to which, since we cannot say what an individual mind is, we can hardly hope to provide more than a partial answer. Yet we do talk of the spirit of a nation, the tone of a school, the *ethos* of a club; and we ought to inquire what meaning can be legitimately given to such terms.

Although we cannot define mind, we can at least say that mind shows itself in drive and purpose, in ideas, in sentiments, and in memories; and we can decide which types of social group exhibit such mental forces and factors. A mere crowd has no purpose beyond that of the moment; it has no memories or sentiments, and thus we cannot attribute a mind to it in any useful sense of the term. But the case is different with a club. It does have a permanent purpose, it has memories of its past achievements and love-sentiments towards its object, and here we have at least a rudimentary mind or spirit. Still more in a community do we have comprehensive common purpose, common sentiments and memories, common aims and ideals. The true community is even conscious of itself: it knows what it as a community is aiming at, and it seeks to carve out its own destiny. In this sense we can certainly talk of a community-mind—the mind of a nation, for example. It remains to examine the

conditions under which a strong community - spirit is fostered, and this we now proceed to do.

Conditions for the Formation of the Group Spirit

(1) First of all there must be continuity of existence of the social group. That is not necessarily to say that it must always comprise the same members; it must, however, exist continuously as a group, the organization and purpose of the group persisting however the membership may change. Clearly a school, a college, an army regiment, a learned society, a Church, and a nation fulfil this condition; but a mere crowd does not.

(2) Secondly there must exist in the minds of the individual members of the group some clear idea of the group and its purpose, function, and organization. That is to say the group must be conscious of itself and develop a strong self-sentiment. A member of a group who cares nothing for the group or its purposes and ideals contributes nothing to it; indeed, his presence is a positive hindrance to the formation of a community-spirit. Thus it is necessary to keep well before the minds of individual members the idea of the group as a whole. Training in citizenship, for example, must include instruction in the history, government, and ideals of the nation; and the citizen in the making must perform definite services to the nation rather than pursue his private aims all the time.

(3) Thirdly the group must interact with other groups which have different ideals, purposes, traditions, and customs. This is a powerful means of engendering the group self-consciousness of which we have been speaking. It is unfortunately true that this condition is most readily fulfilled when the interaction with a similar group takes the form of conflict: both in 1914 and in 1939 our own

nation was welded into a strong community overnight by the threat from Germany. But the condition can also be fulfilled by co-operation and friendly competition with other groups, and it may be hoped that in the post-war years our own essential national unity may be fostered in this way. Every schoolmaster, college principal, or choral conductor knows how the group spirit of which he is the chief guardian cannot flourish in isolation from other similar groups.

(4) In the fourth place there must be something akin to memory: that is to say, there must be traditions, customs, and habits. Tradition, no doubt, can be tyrannical and obstructive in a nation, or in any other social group, yet it is a most potent force in welding the group together. While in politics tradition is usually associated with the Conservative Party, there are few out-and-out radicals who would lightly scrap all the traditions that have become firmly established in the thousand years of our history as a nation. Our political genius is to build the new on the foundations of the old, to preserve existing institutions while adapting them to new conditions: violent revolutions have for a long time been avoided in our country, and for this we ought to be thankful. Possibly some of our Continental neighbours might be a little less obstreperous if they were as sure of their tradition as we are of ours. Clearly nations with a history, and all old-established institutions, have in respect of this condition a great advantage in the fostering and maintaining of a community-spirit.

(5) Lastly, there must be leadership. The true community always tends to organize itself and, in particular, to set aside certain members for the formation of policy. This condition is of supreme importance if the social group is to be a community rather than a crowd, if it is to be capable of rising to high levels of collective behaviour.

Just as there must be group-memory, so must there be group-drive or group-purpose. This purpose is always focused, if not engendered, in the minds of a few outstanding members of the group; and the true leader is the one who can formulate clearly and express forcibly the vague strivings and aspirations of all. A social group throws up its natural leaders who are the common man writ large: it cannot be doubted that Hitler was the natural leader of the Germany of the 1930's just as Churchill was the natural leader of our own nation when it found itself again in 1940. Before the war the nation was not ready for Churchill: he was then a mere voice crying in the political wilderness. But the leader, while he is leader because of his ability to embody the aspirations of the common man, has a contribution of his own to make which is of outstanding importance in community life. If he is a man of wisdom and vision, of high ideals and lofty purposes, of broad human sympathies, then those whom he leads will tend to rise to his own high level, and the behaviour of the social group will be superior to that of which individual members by themselves would be capable; and this is what happened in this country in its "finest hour." If, on the other hand, the leader is a man of evil intent, driven by a lust for power, a hater rather than a lover of mankind, the social group which he leads will, as we know to our cost, descend to depths of perverted wickedness of which the individuals comprising the group would by themselves be incapable.

Conclusion

Long ago Socrates said, "Know Thyself"; and this ought to be our main object in studying psychology. But the selves we ought to know are not merely our individual selves but also our social selves. It is not enough to

understand the behaviour and the motives of solitary men and women: we must also understand their behaviour and motives as members of a social group. It is hoped that the simple considerations put forward in this final chapter of our brief study may bring to the reader some understanding of himself and his neighbour as "political animals," and an appreciation of the responsibility of the common man for the choice of national leaders. It is of the utmost importance at this critical moment in man's long history that leaders of vision should be found who will direct the march of humanity aright, for "where there is no vision the people perish." And this is true not merely in the national sphere. All our schemes for the avoidance of future disastrous wars, for international security and brotherhood, will come to naught unless there emerges a leadership which will be effective beyond the confines of any one nation. It is surely not too much to hope that the heartfelt aspirations of common men everywhere will yet find their proper voice; and that there will be found famous men who, "leaders of the people by their counsels, wise and eloquent in their instructions," will in these latter days make a reality of the age-old dream that men "shall beat their swords into plowshares, and their spears into pruning hooks."

QUESTIONS AND EXERCISES

1. Find your own example of a collection of people becoming temporarily a psychological group.

2. Can you think of instances of group behaviour that (*a*) rise above, (*b*) fall below the average level of the behaviour of the individuals who compose that group? What is the explanation in each case?

3. If you have ever been a member of an excited crowd describe how you felt.

4. Give instances from your own experience, or from literature, of sympathy and suggestion.

5. Have you ever deliberately implanted an idea in the mind of another person without his realizing that you had done it? If so how did you do it?

6. Have you ever discovered that an idea you thought was your own had been suggested to you by another?

7. What place has imitation had in your learning of any skilled activity? Has it cramped your individual style?

8. Give instances of the crowd, club, and community types of social group, describing as far as you can the mind or spirit of each.

9. If you were responsible for organizing a school or any other social group how would you seek to fulfil the conditions necessary for the emergence of a strong, healthy group-spirit?

10. Think of leaders whom you have encountered in your own experience, or of leaders in Church or State, and assess their value to the community.

11. How should a schoolmaster (or anyone else whose responsibility it is to direct the activities of a social group) treat those who emerge as the natural leaders of the group?

12. Why did the League of Nations fail in the years between the two wars?

SUGGESTIONS FOR FURTHER READING

DREVER: *Introduction to the Psychology of Education*, chapter xi.

McDOUGALL: *An Introduction to Social Psychology*, chapters iv and xv; *Psychology* (Home University Library), chapter viii; *The Group Mind*.

NUNN: *Education: its Data and First Principles* (third edition, 1945), chapter xi.

ROSS: *Groundwork of Educational Psychology*, chapter xv.

TROTTER: *Instincts of the Herd in Peace and War*.

GLOSSARY

Abilities, motor. Abilities to perform certain actions.

Abilities, perceptual. Abilities to notice certain things or features in the environment.

Active forgetting—see *Forgetting*.

Alternating personalities—see *Personalities*.

Analogy. Argument from cases that are parallel to one another. Argument from the mere fact of likeness.

Analysis. The breaking up of something complex into simple elements.

Anarchic view of intelligence—see *Intelligence*.

Appetite. A motive made active by a state of the body: a hunger.

Associationism. The psychological doctrine that explains and stresses the connexion between ideas.

Attention. The focusing of the mind on an object of thought resulting in fuller knowledge of that object.

Attention, enforced. Attention promoted by an innate motive.

Attention, spontaneous. Attention sustained by a sentiment.

Attention, volitional. Attention sustained by the will.

Auditory. Having reference to hearing.

Behaviour. The purposive activity of a living creature.

Behaviour, instinctive. Fixed mode of behaviour resulting from an innate motive being exclusively linked to a narrow range of abilities, as in the case of the lower animals.

Behaviourism. The school of psychology which studies behaviour objectively and which does not seek an explanation in terms of mind.

'c.' Cleverness: the mental factor that measures originality, sparkle, wit.

Catharsis. Outlet for emotion afforded by drama, etc.: the purging of the feelings.

Character. The organization of all the motives into the self.

Cohesion. The power of the mind by virtue of which motives and dispositions join with one another to form larger wholes.

Compensation. Balancing a mental activity in one direction by an activity in the opposite direction.

Complex: (a) A unification of dispositions in the mind; (b) a repressed motive.

Concept. A comprehensive pattern in the mind which enables one to entertain general ideas as objects of thought.

Consolidation. The unification of the mind that takes place during an interval of rest.

Correlate. That which bears a given relation to a given object.

Dispositions. The after-effects of experience retained by the mind.

Dissociation. The sundering of a motive or set of motives from the self.

Emotion. Pronounced feeling-state along with the appropriate impulse to action.

Enforced attention—see *Attention*.

Experience. General term which includes all a person's thinking, feeling, and striving: the functioning of the mind.

Forgetting, active. Forgetting due to conflict of motives in the unconscious.

Forgetting, passive. Forgetting due to lapse of time and lack of interest.

'g.' The factor which measures the general intellective power which enters into all abilities.

Group, psychological or social. A collection of people who think, feel, and act together.

Gustatory. Having reference to taste.

Habit. Fixed mode of behaviour.

Hypothesis. A provisional theory or explanation.

Idea. Object of thought of a general character.

Image. A mental picture: an imagined sight, sound, taste, smell, touch, etc.

Imagination or imaginative thinking—see *Thinking*.

Imitation. The copying of another person's action.

Instinctive behaviour—see *Behaviour*.

Intelligence. Native ability, mother-wit, "gumption": "inborn, all-round, mental efficiency."

Intelligence, anarchic view of. The view that "intelligence" is the sum-total of a host of separate, unrelated abilities.

Intelligence, monarchic view of. The view that "intelligence" is one sovereign mental power that pervades all our abilities.

Intelligence, oligarchic view of. The view that "intelligence" consists of a few major mental powers.

Intelligence quotient. The ratio of mental age to actual age, usually expressed as a percentage.

Interest. Innate or acquired motive that prompts one to attend to a certain object and to act with regard to it.

Introspection. Looking within: "the notice which the mind takes of its own operations."

Introvert. One who is primarily interested in his own thoughts, feelings, and desires.

Kinæsthetic. Having reference to sense of bodily posture.

Life-urge. The drive or dynamic aspect of mind.

Master sentiment—see *Sentiment*.

Meaning, primary. The meaning a situation has for a person on the first occasion he encounters it.

Meaning, secondary. The meaning a situation has for a person after he has learned by previous experience of that situation.

Memory. The recalling of past experience.

Mental age. The measure of a person's intelligence in terms of the age-scale of a standardized test. See p. 118.

Mimesis. The taking over of modes of action, feeling, or thought from others.

Mind. That which manifests itself in thought, feeling, purpose, desire, memory, etc.: that which lies behind experience and behaviour.

Monarchic view of intelligence—see *Intelligence*.

Moral sentiment—see *Sentiment*.

Motive. That which determines behaviour and experience.

Motor abilities—see *Abilities*.

Olfactory. Having reference to smell.

Oligarchic view of intelligence—see *Intelligence*.

Organic. Having reference to bodily organs.

Organism. Living creature with interdependent parts sharing a common life.

Passive forgetting—see *Forgetting*.

Perception or perceptual thinking—see *Thinking*.

Perceptual abilities—see *Abilities*.

Personalities, alternating. Separate and mutually exclusive personalities acting in turn as the self.

Personalities, secondary. Personalities separate from the main self, but subsidiary to it.

Personality. Distinctive personal character, with special reference to power of impressing others.

Perversion. The diverting of the energy of a motive from its natural goal into channels that are harmful and degrading.

Phrenology. The study of the external confrontation of the head as an index of mental qualities.

Physiognomy. The study of the face and facial expressions.

Primary meaning—see *Meaning*.

Psychoanalysis: (*a*) Technique for the discovery of unconscious mental conflict; (*b*) The theory of the above technique.

Psychological group—see *Group*.

Rationalization. Giving plausible reasons for one's behaviour, rather than finding the true motives.

Reasoning. Solving a problem in imagination.

Regression. The energy of motives flowing in channels which properly belong to an earlier stage of mental development.

Relation. Connexion between two objects of thought.

Repression. Name given to the phenomenon whereby the self prevents a motive from finding direct expression in experience and behaviour.

Retention. The mind's power of preserving the after-effects of past experience.

Secondary meaning—see *Meaning.*

Secondary personalities—see *Personalities.*

Self-regarding sentiment—see *Sentiment.*

Sensation. The object of thought which is presented to the mind when a sense-organ is stimulated.

Sentiment. An organization of motives which impels a person to experience his impulses and emotions in regard to a specific object.

Sentiment, master. A sentiment capable of dominating all other sentiments.

Sentiment, moral. A sentiment whose object is a moral quality.

Sentiment, self-regarding. The sentiment whose object is the self.

Social group—see *Group.*

Spontaneous attention—see *Attention.*

Subconscious. Applied to experience, the word means that the experience is unapprehended or only dimly apprehended.

Sublimation. The redirection of the energy of a motive from its natural goal to one that is of permanent individual and social value.

Suggestion. The implanting of ideas in the mind of another person who accepts them uncritically, not realizing that they do not originate with himself.

Sympathy. The sharing of the feelings of others.

Synthesis. The putting together or building up of separate elements into a whole.

Tactual. Having reference to touch.

Telepathy. Action of one mind on another at a distance, without communication through the senses.

Temperament. Mental quality having a bodily origin.

Thinking. Mental activity in its knowing aspect: mental activity with regard to objects that are known.

Thinking, imaginative. Mental activity with regard to images and ideas.

Thinking, perceptual. Mental activity with regard to objects that result from the stimulation of a sense-organ: *i.e.* mental activity with regard to sensations.

Unconscious, the. The seat of motives.

Vitalism. Doctrine that life is an ultimate notion which cannot be explained in terms of chemistry and physics.

Volitional attention—see *Attention*.

'w.' Will-power. The mental factor that measures persistence of motives.

Will. The whole of the organized self brought to bear on a situation.